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ABSTRACT

This book contains seven papers presented at a conference on the future of teacher education. Richard M. Hersh examines the social organization of the school and the school's instruction and curriculum in "What Makes Some Schools and Teachers More Effective." In "Teacher Education: Needed Research and Practice for the Preparation of Teaching Professionals," Judith E. Lanier outlines paradigms for effective teachers. Two critical issues are discussed by Dean C. Corrigan in "Curriculum Issues in the Preparation of Teachers": (1) identifying, accepting, and teaching a common body of knowledge, skills, and professional values; and (2) establishing and enforcing quality controls. In "The Content in Teacher Education Programs," David C. Smith describes two PROTEACH conferences which reconceptualized content and components of an effective teacher education program. An overview is presented by Richard Wisniewski of Oklahoma legislation to improve the quality of teacher education in "The Law: A Step Forward in Oklahoma." Martin Haberman traces the history of student teaching and cites the need for further research in "Research Needed on Direct Experience." George Denemark presents "Closing Remarks: An Attempt at Synthesis." (JD)

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Conference Proceedings

THE FUTURE OF TEACHER EDUCATION:

NEEDED RESEARCH AND PRACTICE

Editors: Dean C. Corrigan
Douglas J. Palmer
Patricia A. Alexander

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THE FUTURE OF TEACHER EDUCATION: NEEDED RESEARCH AND PRACTICE

Editors:

Dean C. Corrigan
Douglas J. Palmer
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TABLE OF CONTENTS

Foreword v

What makes some schools and teachers more effective. *Richard M. Hersh* 1

Teacher Education: Needed research and practice for the preparation of teaching professionals. *Judith E. Lanier* 13

Curriculum issues in the preparation of teachers. *Dean C. Corrigan* 37

The content in teacher education programs. *David C. Smith* 49

The law: A step forward in Oklahoma. *Richard Wisniewski* 61

Research needed on direct experience. *Martin Haberman* 69

Closing remarks: An attempt at synthesis. *George Denemark* 85

FOREWORD

Effectiveness of our nation's schools to meet the increasingly complex demands placed on public education is a growing concern of parents, legislators and educators. Twenty-five years ago, Drucker (1957) accurately predicted that schools of the future will be required to educate all children, with increased emphasis on individualization of instruction and a greater degree of accountability. Today, teachers are asked to provide appropriate instruction to pupils with a variety of handicapping conditions, who may be culturally and linguistically different. Unfortunately, while these educational goals are laudable, teachers generally do not receive professional preservice training to meet the demands of their roles (Denemark and Nutter, 1980). Denemark and Nutter note that a basic concept of professional training program is that its graduates have attained a level of competence sufficient to insure "safety to clients".

In their report, *Educating a Profession*, Howsam, Corrigan, Denemark and Nash (1976) report that one of the characteristics of a profession is that it possesses a body of knowledge and skills needed in the practice of a profession. Howsam et al. (1976) state that one of the differences between an educated person and a professional teacher is pedogogy — the science of teaching. As a result of research and development efforts over the past twenty years, there is a vast and growing body of information related to effective schools and teachers. If preservice teachers are not acquiring the knowledge and skills in their preservice training programs for them to perform as professionals, it is not because of a lack of information in the field. Rather, it may be due to both the current content and structure of many teacher education programs.

In an attempt to provide a forum to discuss content, structure and issues related to the future of teacher education, a conference was held in May, 1982 at Texas A&M University. The conference was sponsored by the College of Education and the Dean's Grant Project at Texas A&M University. With the exception of Dean Corrigan's paper, the material included in this text was presented at this conference. The conference presenters consisted of educational leaders who have been at the forefront of teacher education. It is hoped that this collection of papers on effective schools, teacher effectiveness and teacher education will enhance dialogue among educators regarding the future of teacher education.

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WHAT MAKES SOME SCHOOLS AND TEACHERS MORE EFFECTIVE?[1,2]

Richard H. Hersh*

For the past two years I have been reviewing literature to determine what, if anything, makes some schools and teachers more effective than others. Happily, there emerges from such research a variety of clues, which when put together into a coherent whole, seems to make a great deal of intuitive sense. What is particularly pleasing is that different researchers in a variety of studies are reaching similar conclusions about effective schooling and that these conclusions are reinforced by school teachers and administrators who bring to research programs the critical eyes of experience. This conjunction of researchers' knowledge and professional educators' wisdom marks the first time in years that one might believe optimistically in the possibility of improving education in America.

SCHOOLS DO MAKE A DIFFERENCE

During the early 1970's, researchers had the public and policy makers believing that variations among schools made no difference in student learning. Although teachers' and administrators' daily lives denied such a conclusion, their protests were muted by the media and critics' ready condemnation of American schooling. Now research findings and educational reality are congruent.

Three powerful facts have emerged. First, people run schools. How teachers, administrators, and students behave in a school setting matters and accounts heavily toward determining a school's effectiveness. Second, quality and not just quantity of effort, materials, and time is what counts. Previously measured factors such as the total books in the school library, amount spent per child, and the average number of years of teacher experience have been shown to account for little difference between more and less effective schools. Third, the curriculum of the school, which includes both *what* is taught and *how* it is taught, is important.

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[1]"Effective" here refers to student academic achievement as measured by standardized achievement tests, usually in reading and math. This is not to suggest that such schooling outcomes are the only objectives we should consider but rather that they are, for the moment, the only variables on which we can easily compare schools.

[2]While individual citations are not found within the body of this paper, a bibliography reflecting effective schools and teachers literature may be located at its conclusion.

ATTRIBUTES OF EFFECTIVE SCHOOLS

Table I lists two sets of attributes associated with most effective schools. Under the heading of "Social Organization" are listed those items that pervade the school building. These attributes (Clear Academic and Social Behavior Goals; Order and Discipline; High Expectations; Teacher Efficacy; Pervasive Caring; Public Rewards and Incentives; Administrative Leadership; Community Support) help promote school-wide conditions for teaching and learning across all classrooms. In essence, these are necessary social conditions that help individual teachers and students to excel.

The second heading, "Instruction and Curriculum," subsumes those items which are found in the most effective classrooms. These attributes (High Academic Learning Time; Frequent and Monitored Homework; Frequent Monitoring of Student Progress; Tightly Coupled Curriculum; Variety of Teaching Strategies; Opportunities for Student Responsibility), in the context of the previously mentioned social organization factors, help promote the classroom conditions for maximum student engagement with purposeful learning activities. Please note that the line between the two sets of conditions ("Social Organization" and "Instruction and Curriculum") is not hard and fast. In fact they are both overlapping and interactive, complementary and reciprocal to each other. Clear school-wide goals, for example, not only may help generate community understanding and support but also may allow individual teachers to better assess the fit between their expectations for students, students' expectations of themselves, and the curriculum.

TABLE I

ATTRIBUTES OF EFFECTIVE SCHOOLS

SOCIAL ORGANIZATION	INSTRUCTION AND CURRICULUM
Clear Academic and Social Behavior Goals	High Academic Learning Time (ALT)
Order and Discipline	Frequent and Monitored Homework
High Expectations	Frequent Monitoring of Student Progress
Teacher Efficacy	Tightly Coupled Curriculum
Pervasive Caring	Variety of Teaching Strategies
Public Rewards and Incentives	Opportunities for Student Responsibility
Administrative Leadership	
Community Support	

SOCIAL ORGANIZATION

Schools are social entities whose function is purposeful learning. As with all social groupings their organizational existence is dependent on adherence to some minimum *common* sets of values, norms, beliefs, expectations, rules, and sanctions. Rutter refers to this as a school's "ethos." Wynne calls it "coherence." Glass uses the word "tone." I prefer "community." Whatever term is selected it is important to note that there is a need in a school for such shared agreements on rules and the like because it is the existence of common understanding and assent which creates the foundation

for trusting and respect for others — the glue of social and moral intercourse. The research suggests that schools which are most effective create a distinctive sense of community within the school building, a community derived from conditions that profoundly affect how and why educators and students treat each other, how much that precious commodity time is valued, and how well academic and social learning skills are integrated.

CLEAR ACADEMIC AND SOCIAL BEHAVIOR GOALS

Effective schools have articulated a clear school-wide set of academic and social behavior goals. Basic skill achievement in reading, writing, and mathematics is heavily emphasized across the entire teaching staff as is student behavior that promotes an orderly classroom and school climate. There is no ambiguity. Teachers, parents, and students share the same understanding of the school's goals.

Order and Discipline

Administrators, teachers, and students understand and agree to basic rules of conduct. Each person may expect that such rules will be uniformly enforced, be they rules against gum chewing, running in the hallway, hitting another person, or showing disregard for school property. The attitude of each teacher is that "I have the right to enforce the rules even if the student is not in my particular class."

The concern for an orderly and disciplined school climate is not meant to be oppressive. The 1960's critics of oppressive schools made their point so well that the pendulum has often swung too far the other way with the result that the quest for "open" schools and classrooms has frequently ended in near chaos. Effective schools seem to find that happy medium between too rigid and too loose discipline. The solitude of a tomb is not required but neither is the noise of a circus tolerated. Effective schools recognize order as a social necessity, not too much order as to snuff out spontaneity and individualism but enough to get on with the business of learning. When asked, students in effective schools state that the rules and teachers are fair, even if they don't like the rules or penalties.

High Expectations

Teachers and administrators in effective schools hold higher academic and social behavior expectations for their students than do teachers and administrators in less effective schools. High expectations carry several messages. First, they symbolize the demand for excellence and tell the student, "I think you ought to and can achieve." Second, they communicate to the student that the teacher cares by saying, in effect, "The reason I have high expectations for you is that I care about you." Third, high expectations serve as the adult world's professional judgment which is translated by the student as, "I am really more capable than even I, at times, think I am. If my teacher continues to have high expectations for me, even when I screw up, then maybe I really can do better."

Teacher Efficacy

Effective schools have teachers who have a strong sense of efficacy — a belief which says, "I *know* I can teach any and all of these kids." Efficacy is a sense of

potency, and it is what provides a teacher with the energy needed for relentless and persevering effort required to get many students to work. A sense of efficacy combined with high expectations for one's students communicates powerfully to students that they can learn and that they will learn, or dammit, we will both die trying!

Pervasive Caring

Students in effective schools tell you that their teachers and administrators care about them. One child, when asked, "How do you know your teacher cares?" responded, "Because she gets mad at me when I don't do my homework or do poorly on a test."

Caring is expressed in a variety of ways. High expectations, strict but fair enforcement of rules, and homework assignments, for example, all tell the student that the teacher is paying attention to them and cares about their achievement. Observers of effective schools see the caring atmosphere in the informal patting of children's heads, the rigorous demands of a high school English teacher symbolized by blue penciled essays, and the staff's collective celebration of student achievement. Teachers, administrators, and parents, too, know when a school is a caring place for students and say so when asked.

Public Rewards and Incentives

Effective schools have a system of clear and public rewards and incentives for student achievement. Public display of excellent student work, honor roll, assemblies to honor student excellence, notes sent home to parents, and verbal and non-verbal praise from teachers as often as possible serve to motivate and sustain students' achievement of a school's high expectations for them.

Administrative Leadership

Effective schools have adminstrative leaders, most often principals, who are active advocates for and facilitators of the above set of conditions. Such leadership does not mean that the principal, for example, must do the curriculum revision, or be the master teacher, or conduct the teachers' evaluation. Rather, it means that the principal is a person who helps to make sure these tasks are carried out appropriately. Such a person listens to staff requests and seeks to support such requests whenever reasonable. Such a person initiates dialogues concerning expectations, school-wide rules, and the establishment of a good testing program. Most essentially, with such leadership, the administration is seen by both teachers and students as supportive, caring, and trustworthy, all of which helps create conditions for excellence.

Community Support

Effective schools have been found to have more parent and community contact than less effective schools. Contact with parents is not limited to concerns of truancy or misbehavior. Parents and other community members are engaged in school beautification programs, tutoring, fund-raising, and just plain being kept informed of school expectations, successes, and failures. Effective schools usually have more positive parent-initiated contacts than do less effective schools.

INSTRUCTION AND CURRICULUM

"Instruction and Curriculum," which comprises the second set of attributes in Table 1, refers to that part of schooling most familiar to the public. For example, results of the post-Sputnik revolution in schooling (with its increased emphasis on math and science, its extension into the new curricula, inquiry teaching, open classrooms, and mini-courses) were all highly visible and publicized alterations in the instructional and curricular patterns of the past two decades. Only recently have researchers begun to understand the mechanisms underlying the strengths and weaknesses of some of the components of these patterns. Clearly all of the factors previously discussed as part of the social organization of the school overlap and complement the instructional curriculum. I have labeled these two sets of attributes separately only for the sake of convenience in this discussion.

High Academic Learning Time (ALT)

Not surprisingly researchers have found that up to a point, the more time one spends on a learning task the more one learns. Although this sounds perfectly obvious and perhaps hardly worth mentioning this redisovery is actually more complex and very important.

First, researchers have found that in many classrooms teachers may *allocate* a great deal of instructional time (for example, reading instruction) but the students are behaviorally engaged in learning how to read (reading, reciting, doing worksheets, etc.) for only a small fraction of the allotted time. Several studies show that second and third grade teachers might allocate two hours per day for reading instruction, but upon observation of their classrooms, one could see students spending an average of only 12 to 15 minutes a day in learning how to read! Thus, allocated time, or teachers' *intended* time for instruction, has been shown not to be the best indicator of what covers effective instruction.

Consequently, a more precise measure of time has been substituted for allocated time. Called "time on task," this is a measure of how much time students actually are engaged in the study of a particular subject or skill. However, although this measure approximates more closely the actual time a student spends on a learning activity, it does not reveal whether or not the student is successfully learning while engaged in that learning task. Imagine a student who has great perseverance and spends many hours trying to read a history book in class that is four grade levels above his/her reading level. Clearly this mismatch of instructional material and time on task would not correlate with effective, much less efficient, learning.

Finally, therefore, researchers have arrived at the notion of Academic Learning Time (ALT). This is the amount of time a student actually spends on a learning activity in which he or she is achieving a high rate of success (90% or better) at that task. ALT takes into account the amount of time well spent and requires assessment not only of the time dimension but also of the appropriateness of the curriculum and measures of success. The key research finding here is that effective schools have much higher ALT ratios than do less effective schools. Not only do teachers in more effective schools

waste less class time in starting and ending instructional activities, but they select curriculum materials that are most appropriate to student abilities.**

Frequent and Monitored Homework

Teachers in effective schools, after fourth grade, require more homework more often *and* provide students with feedback about how well their homework was completed. Homework, up to a point, tells the student that learning is more than just a schoolroom activity, that expectations go beyond minimum effort, and that independent learning is valued. Perhaps equally important, homework increases ALT. By checking homework and providing students feedback, teachers tell students that they care about whether or not it is done (part of the incentive and caring dimension of schooling), as well as find out how well the students are learning on their own.

Frequent Monitoring of Student Progress

Administrators and teachers in effective schools monitor student academic progress more frequently than do staffs in less effective schools. Such monitoring consists of a combination of more frequent classroom tests and quizzes: formal and informal; written and oral; school-wide, district-wide, and national. Most emphasis is placed on frequent in-class monitoring coupled with direct and immediate feedback to students. Such frequent monitoring serves an important diagnostic function, prevents students from falling behind, and tells students that what is being taught is important.

Tightly Coupled Curriculum

Effective schools have a curriculum that is closely related to both school-wide and individual grade-level objectives. Teachers do not rely solely on commercial products but tailor or create materials and activities to meet agreed upon goals. The need for a tight connection between curriculum and objectives is perhaps best illustrated by a recent study which found that the five most widely used standardized test items in the U.S., in fourth-grade math, had no more than 60% correspondence with any of the three most popular selling fourth grade math textbook series. Effective schools purposely link goals, curriculum, and evaluation devices in a tightly coupled way to avoid the common mismatch in testing and teaching.

Variety of Teaching Strategies

Several studies have found that teachers in effective schools use a greater variety of teaching strategies than teachers in less effective schools. That is, teachers in effective schools are able to accommodate to student differences (as measured by frequent evaluation) by employing alternative teaching strategies when students do not seem to be succeeding.

Opportunities for Student Responsibility

Effective schools provide students with more opportunities for engaging in responsible behaviors. Such opportunities include student government, hallway

**Ten minutes of lost instruction in each high school class per day totals at least one hour of lost instruction every day, 180 hours per year, over 500 hours for three years of high school. Given that an average high school course requires about 180 to 200 hours of in-class instruction per year, 500 lost hours is considerable.

monitors, discipline panels, peer and cross-age tutoring, and school fund raising projects.

CUMULATIVE EFFECTS

Each of the attributes above has been shown separately to exist in some effective school studies. However, simply creating one, two, or three of such conditions at random would not necessarily result in a more effective school, measured at least in academic achievement terms. The more important conclusion that one draws from the research is that it is the cumulative effects of these conditions that has payoff. Although no one has shown which ones or how many of the above conditions are necessary and sufficient to guarantee an effective school, observers of such schools suggest that there is an element of synergy involved. That is, it seems that one has to do many things at once to do one thing well. It would be folly, for instance, to believe that simply increasing teacher expectations for students would necessarily lead to increased ALT or teacher efficacy. However, in combination, many of the attributes above may help create a critical mass of conditions that serve to promote student achievement.

IMPLICATIONS FOR TEACHER EDUCATION

Reflecting on the effective schools and teaching literature, it appears that teacher training programs need to attend to personal characteristics of teachers and effective curriculum, instruction methods, and classroom management strategies. It is posited that attention to these factors will impact both the content and the structure of teacher education programs. To train teachers with the personal characteristics and skills in curriculum, instruction, and management to be effective will require a more intensive and extensive process for: 1) screening teacher training applicants, 2) pre-service training, and 3) residency training once the teacher trainee has graduated and is hired (see Figure 1).

While criteria for entry to teacher training programs has been, to a large extent, minimal and narrow in focus, teacher trainers should examine students' academic performance both within and outside the field of education, supervisor ratings and observations of students in field settings, and interview information from the candidate. This broader base of screening information will assist teacher trainers to make judgments regarding students' cognitive competence, self-perception, commitment to education, and interpersonal competence.

To insure that pre-service students have the necessary academic foundation and specialized education training to be effective teachers, the redesign of four year training programs will be required. Pre-service training will need to be extended one to two years beyond a four year bachelor's degree to include a variety of field experiences, one of which would be a full year supervised internship. In addition, students need to be exposed to both the best and worst of instructional settings and learn to be an effective educator in both situations. Too many students only experience the best of instructional settings in their pre-service training and are ill-prepared to adjust to the reality of many public school settings.

Finally, supervised training should also be continued once the graduate is hired by

a school district. There should be a residency period in which the new graduate has less than a full teaching load and is given frequent supervision. Following this one or two year supervised residency period, an inservice support system should be provided to insure maintenance and development of professional skills.

Figure 1

IMPLICATIONS FOR TEACHER EDUCATION

Personal Characteristics	**Curriculum & Instruction**	**Management**
Caring	Clear Objectives (Foundations)	Order & Development
Commitment	Tightly Coupled Curriculum	Academic Learning Time
Ego-Strength	(Objectives — Curriculum — Evaluation)	Testing & Feedback
Sense of Efficacy	Variety of Teaching Strategies	Interpersonal Competence
High Expectations	Concept of Group/Individual Instruction	
Selection	**Training**	**Hiring**
Field Experience	Curriculum & Instructional Competence	Supervised Residency
Excellence in Liberal Arts Studies	Management Skills	Less Than Full Teaching Load
Evidence of Commitment to Teaching	1-2 Years Beyond Bachelor	Inservice Support System
Interviews	Experiences in Worst of Settings	
Tests	Full Year Supervised Internship	

SUMMARY

The best summary of this literature was recently articulated by Tomlinson in a *Phi Delta Kappan* article. He states that school resources are not the first or generic cause of learning.

> The ability and effort of the child is the prime cause, and the task of the schools is to enable children to use their abilities and efforts in the most efficient and effective manner. In the last analysis, that translates as undistracted work, and neither schools nor research have discovered methods or resources that obviate this fact . . . We should take comfort from the emerging evidence: it signifies a situation we can alter. The common thread of meaning in all that research has disclosed tells us that academically effective schools are "merely" schools organized on behalf of the consistent and undeviating pursuit of learning. The parties to the enterprise — principals, teachers, parents and *fait accompli* students — coalesce on the purpose, justification and methods of schooling. Their common energies are spent on teaching and learning in a systematic fashion. They are serious about, even dedicated to, the proposition that children can and shall learn in schools. No special treatment and no magic, just the provision of the necessary conditions for learning.

Tomlinson reminds us that in the end it is what students do that ultimately causes student achievement. All the conditions, all of the attributes I have discussed are the context for maximizing student effort.

Finally, I find it hopeful that the conditions for effective schooling are in our control, that more than money, it is a will for excellence that may best serve as the catalyst for school improvement.

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TEACHER EDUCATION: NEEDED RESEARCH AND PRACTICE FOR THE PREPARATION OF TEACHING PROFESSIONALS

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INTRODUCTION

Discourse for this conference has focused on the future of teacher education, with particular attention to needed research and practice. It is indeed important that we look to the future, but in so doing, we must look to the past and present as well, so that our visions are informed by experience and learning that has already occurred. Reflections and analysis of past and present research and practice in teacher education can also help frame more realistic views of future needs and possible responses. The assumption that guides this belief is that educational change, like most social change, evolves out of existing conditions; that is, it tends to be more evolutionary than revolutionary and will thus be determined in large part by past and contemporary research and practice.

Within the general context of considering future needs for research and practice in teacher education, however, the more particular focus requested for this paper was attention to "research on teaching and profiles of the effective teacher." Major attention is therefore given to various paradigms of the effective teacher that have appeared to frame past and present research and practice. As the changing views are described, the essence of the gradual shift in research and practice for teacher education is cast as a growing recognition that teaching requires preparation for a truly professional role. The increased need for professional teacher preparation and research on professional judgment is emphasized as three conceptions of the effective teacher are considered. Two conceptions have been obvious and prominent in the thinking and literature prior to the past decade and a third conception is gradually emerging and is represented in more contemporary thinking and literature on the subject of teaching. The three conceptions that appear to shape and form the profiles of effective teaching that will be discussed include:

(1) *The teacher as an effective person*, i.e., the most important pedagogical skills are imbedded in unique personal qualities and human characteristics;

(2) *The teacher as a skilled performer*, i.e., the most important pedagogical skills are imbedded in the behavioral performance of smoothly orchestrated routines and actions; and

(3) *The teacher as a professional decision maker*, i.e., The most important pedagogical skills are imbedded in the exercise of informed human judgment that is grounded in a substantive body of formal and practical knowledge concerning the human endeavors of teaching, learning and schooling.

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These three general conceptions are represented in the literature and have paralleled the dominant research paradigms on effective teachers and teaching. Whether the research activity reflected *or* created the conceptions is likely unimportant and unanswerable, like the classic chicken/egg argument over which came first. We should observe and note, however, that the evolution of the conceptions appears to follow the development of a more complex, sophisticated and respected knowledge base on the field of teaching itself.

A point of clarification is needed to avoid a potentially serious misinterpretation and should be emphasized before describing the research on teaching and practices in teacher education that reflect these conceptions. The point is that each conception is *not* distinguished by a total neglect of the other. Rather, each conception is distinguished by the salience of its point of interest, i.e., by the amount of attention and emphasis given to the particular aspect that was judged to be most promising and important at the time. Thus, each conception is considered unique because of the primary questions and issues that were placed in the foreground, as opposed to the background. Viewed in this light, the conceptions are not totally separate or mutually exclusive. Educators have and still do see aspects of each conception as worthy and important; but at various points in time, the field has generally attended more to one than another and has not generally attended to interactions among the three.

THE PERSONAL CHARACTERISTICS OF TEACHERS: RESEARCH AND PRACTICE

Research is always guided by views about where the most promising results might be found, and studies of effective teaching have been no different. The predominant focus of the early research on teaching was on the personal characteristics of teachers themselves. This line of work, in fact, might be described more correctly as research on teach*ers*, rather than research on teach*ing*. Nevertheless, the personal qualities of teachers were assumed to be of major importance to effective teaching and if these characteristics could be identified, measured and shown to be scientifically valid predictors of effective teach*ing*, then they could be used appropriately for screening, selection, and retention purposes.

The more or less standard approach to inquiry in these early years was for prospective or practicing teachers to be tested, surveyed and/or interviewed for purposes of describing their backgrounds, personalities, attitudes, values, understandings and beliefs. Supervisors' judgments (typically university faculty or school administrators) were used to identify the more and less effective teachers and then the teachers' personal characteristics were examined for comparison and contrast. The search was for unique personal qualities or characteristics that would consistently distinguish teachers judged to be more effective from those judged less effective by sets of external evaluators (Getzels & Jackson, 1963; Biddle & Ellena, 1964).

Although this line of inquiry was generally unproductive for a relatively long period of time, its logical appeal caused researchers to attribute their failures to flaws in instrumentation or research design. They continued to pursue their basically unfruitful search for personal attributes of "the good teacher" until Ryans' classic, exceptionally well-designed study of teacher characteristics was completed and reported in 1960. His

work was so well done and yet so generally unproductive of useful findings that the field began to move away from this particular paradigm.

A number of standard practices in teacher education at this same time also supported the view that personal qualities were important, stable, and capable of being reliably measured for purposes of judging effectiveness in teaching. Student teaching evaluations often included ratings on such personal qualities as dress, grooming, punctuality, humor, tact, poise, commitment, friendliness, vitality, health, and acceptance of criticism. Moral character and respectable conformity to predominating social values were similarly emphasized (McNeil & Popham, 1973).

In the absence of knowledge, or in the absence of general agreement on what was known about effective engagement in teaching practice, the personal qualities of the individual quite naturally took on special importance. This perspective should not be viewed as unique from that in other fields when trustworthy knowledge is not available. In the field of medicine, for example, when little was known about many ailments, and even less was known about effective treatment, bedside manner and related human qualities played a much more important role than they do today. As the knowledge base relating to medical practice qualitatively advanced, people became less concerned with the personal characteristics of their physicians and more concerned with their professional knowledge and ability to properly diagnose and treat physical problems.

THE BEHAVIORAL PERFORMANCE OF TEACHERS: RESEARCH AND PRACTICE

The decade of the 1960's brought a major change in the dominant research paradigm employed for studying effective teaching. The emphasis shifted from a major interest in personal characteristics to a primary concern for teacher behavior and actual performance in school classrooms. This is not to imply that teacher behavior was totally ignored in earlier years, for a modest amount of attention had been given to it, although much of the work involved abstract analysis and psychological classification and categorization. Nor did this shift to a concern for teacher behavior suggest that all concern for personal teacher variables was abandoned. It was simply one of primary emphasis; fewer studies continued to examine teacher characteristics outside of the classroom and more studies came to examine teacher behavior inside of the classroom (McNeil, et al., 1973). Referring to the dominant approach to research on teaching prior to the 1960's, Medley and Mitzel (1963) reported in the first *Handbook of Research on Teaching:*

> Certainly there is no more obvious approach to research on teaching than direct observation of the behavior of teachers while they teach and pupils while they learn. Yet it is a rare study indeed that includes any formal observation at all. In a typical example of research on teaching, the research worker limits himself to the manipulation or study of antecedents and consequents of whatever happens in the classroom while the teaching itself is going on, but never once looks into the classroom to see how the teacher actually teaches or how the pupils actually learn. (p. 247).

In the late 1950's, however, Marie Hughes and a number of her colleagues at the University of Utah received USOE support to undertake research that would help define and describe good teaching and the process by which it could be reliably

determined. Hughes held the view that teaching was an interactive process, and the teacher-student relationship in the classroom had a reciprocal character. Her work thus led to a description and analysis of teaching behavior that was based in patterns of interaction between teachers and pupils in actual classroom settings (1959).

Shortly after this work was underway other researchers, such as Ned Flanders, Bunnie Smith, and Arno Bellack, also began to enter classrooms with a focus on the dynamics of classroom interaction. Though partial attention was given to student behavior, the primary variables of interest during this early work were those associated with teacher behavior. Among the various teacher behaviors to be studied, major attention was given to teacher talk (Flanders, 1970). Various analyses were applied to teacher discourse, and although the general approach was primarily descriptive, the value orientations that inevitably became a part of the work were too easily translated into prescriptive statements.

But was more or less teacher talk a mark of effective teaching? The evidence was simply not there, because the issue of what constituted effective teaching was generally not taken very seriously. Nevertheless, without knowing how or in what way the awareness and use of Flander's analyses of teacher talk and student talk might lead to effective teaching, a number of teacher educators came to include this work in their preparation programs. The studies of teaching and the practice in teacher education in the sixties can be generally characterized as increasing their focus on teacher behavior in classrooms, but generally neglecting the serious criterion problem of relating descriptions of teacher behavior to a clear conception of effective teaching.

The research of the 1970's brought a change in the tendency to slight the effectiveness criteria, and it also gave rise to the third and most recent paradigm for studying effectiveness in teaching. The shift in approach could be attributed in part to two classic studies of the sixties, two studies that received sufficient attention that they truly shook the research on teaching community — though interestingly enough, neither of the researchers doing these studies entered classrooms or acquired any data whatsoever about teacher behavior. These researchers were Coleman and Rosenthal.

Coleman's sociological study examined school characteristics and their relationship to student success as indicated by a variety of measures, including student's test performance (Coleman, Campbell, Hobson, McPartland, Mood, Weinfeld, & York, 1966). After finding that the bulk of the variance relating to student success could be accounted for by factors other than classroom variables, Coleman's work came to be interpreted as showing that teachers made little if any difference. Needless to say, this finding was jolting, but more importantly, it challenged the research on teaching community. Jere Brophy, Tom Good, and Bruce Biddle, for example, found this interpretation of Coleman's findings to be counter-intuitive — it simply did not make sense to think that teachers didn't make a difference to student learning. So they devised a means of estimating average mean gain scores for students in elementary classrooms (using standardized achievement test results) and then identified teachers who consistently produced student gains that were substantially above that which would be predicted. They studied these teachers and found that they behaved in some consistent ways that distinguished them from their more average colleagues (1975).

At this same time, the BTES study that Macdonald, et al., and subsequently Berliner, et al., conducted in California also began to identify various teaching

performances that related to student learning, as did Gage, Stallings, Clark, Peterson, Anderson, Evertson, and others who were searching for teacher behaviors that appeared to correlate with pupil learning gains. But these early studies, in the main, seemed to produce generally obvious results that teacher educators already knew, e.g., time on task was important to learning, teachers who involved youngsters in meaningful activities could keep them engaged for longer periods of time, teacher-provided instruction was more important to learning than instruction provided through seatwork or by other students in the classroom, etc. (Fisher, Berliner, Filby, Marliave, Cahen, Dishaw, & Moore, 1978). Though all of the findings were not obvious, they were not sufficiently powerful to generate great excitement in the field of teacher education. Nevertheless, the research did call Coleman's interpretations and findings into question, and direct evidence was obtained that teachers not only differed, but made a difference to young children's learning of the basic skills in reading and math when measured by standardized paper and pencil exams.

The other major study of the late 1960's that stimulated change in the teacher effectiveness research of the 1970's was the Rosenthal study of teacher expectation. Without entering the classroom, Rosenthal examined pupil learning gains that were apparently achieved after he and his colleague told teachers that particular youngsters were likely to make rapid strides academically, on the basis of an examination, when in fact those children were selected at random. The Oak School Experiment that Rosenthal conducted in 1964 (Rosenthal & Jacobson, 1968) received popular acclaim but was also heavily criticized on methodological grounds. Nevertheless, the work raised the issue of teacher expectations, and the extent to which teacher judgment and teacher thinking (about particular youngsters, in this case) might also affect pupil learning. This possibility soon came to receive more attention.

Psychologists in addition to Rosenthal explored expectation effects, not only in schools but in animal laboratories as well. Graduate students, required to train rats as a part of their program of psychological studies, were frequently told that their class would be divided and half of them would be asked to train slow rats and the other half would be asked to train the fast, apparently smarter rats. The rats did not really differ in ability, of course, and the psychologists were simply inquiring further into the expectation questions raised by Rosenthal. Although the learning tasks and training procedures were typically the same for both sets of trainers and rats, the general results were surprisingly different. The group of rats considered to be "smart" learned significantly faster than the rats considered to be "slow." Unfortunately, like Rosenthal, researchers in the first studies did not observe or look for potential teaching differences that might have occurred during instruction. But in response to these rather powerful and unexpected results, some researchers did have the presence to ask the "teachers" to describe their instructional approaches and techniques — what they did and why. The responses obtained from the logs and post hoc interviews were enlightening and provocative. Trainers of the "smart" rats said things like — "when the poor little fellow didn't learn, I knew that I had to be doing something wrong; after all, he was supposed to be a smart rat. I knew that I had to try a modified approach to teaching, encourage him to take just a few more trials, or modify the reward provided when he came closer to doing it right." In contrast — the trainers of the "slow" rats said things like — "when the poor little fellow didn't learn, I felt sorry for him; after

all, he was slow, and I knew that I just had to be patient. Pushing him too much would be unfair and might have negative effects, so I let him rest occasionally — you could tell when he was getting tired" (Rosenthal, 1968).

Although educators are well known for commenting on the lack of transfer from animal research, the implications of these and related studies were clear. What teachers *thought*, as well the teaching behaviors related to this thought, needed to be further examined, especially as both related to effects on student learning. The work of the late seventies and early eighties has reaffirmed this position. The predominant paradigm now focuses on teacher judgment and teacher decision-making; teaching performance alone is viewed as insufficient for characterizing effective teaching.

There are a number of other important reasons for the shift from teacher behavior to teacher thinking and teacher judgment, however, and it may be helpful to use several of the earlier studies of teacher behavior to illustrate them. Consider, if you will, the implications of two separate lines of research on effective teaching behavior: the work of Mary Budd Rowe and the work of Jacob Kounin. Mary Budd Rowe's studies indicated that when teachers ask youngsters thought-provoking questions during science lessons they frequently do not give learners sufficient time to think about the question and frame an appropriate response (1974). Further, Budd Rowe's work showed that teachers could be trained to adjust their "wait-time" behavior and could, in turn, obtain qualitatively better responses from pupils. It was somewhat disappointing and perplexing to Budd Rowe, however, to find that the teachers trained to increase their wait-time behavior only maintained this performance skill for a relatively short period. When the researchers returned after time away from the classroom, they found that the trained teachers had reverted back to their old behavior; in general, they were again asking questions too quickly and not giving students sufficient time for qualitatively better thinking and responding.

At about this same time, though in a different location, Jacob Kounin was studying teacher behavior that appeared related to off-task behavior on the part of students. He found that when teachers failed to move their instruction along at a relatively brisk pace, youngsters in the class were apt to become bored and subsequently engage in off-task behavior that was not related to the lesson at hand (Kounin & Doyle, 1975). Thus, at a very general level, one could interpret the Budd Rowe research on pacing to be prescriptive of "slowing down" performance, while the Kounin research on pacing was prescriptive of "speeding up" performance.

Although researchers obviously have no clear evidence of which approach is apt to be more correct than the other, it is likely that both sets of findings have implications for effective teaching. Teachers need to know and use knowledge related to the potential effects of their pacing decisions: moving too quickly when asking thought provoking questions can have the negative consequence of reducing quality thinking and responsing on the part of students being called upon; moving too slowly, on the other hand, can have the negative consequence of increasing boredom and off-task behavior on the part of other students in the classroom. Knowing these two potentially negative possibilities, the teacher must obviously make judgments about what is "too fast" and what is "too slow" for the particular set of students he or she is working with at the moment. The next line of research questions thus needs to focus on issues of information processing. What factors should the teacher consider in order to make an

informed judgment related to appropriate pacing decisions in the classroom? How might such judgment differ when introducing new, rather than familiar, concepts? What variations in judgment and decisions are appropriate across different subjects and with different groups of students?

The point of this illustration is that research and practice in teaching has come to acknowledge the complexities of the teaching role as it is now practiced in school classrooms. Effective research and practice in teaching requires the recognition that the role demands placed on the occupation of teaching are multiple and frequently competing. By the very nature of their charge, teachers must respond to a set of multiple demands and seek to maximize alternative desired outcomes.

Unlike researchers, teachers cannot select a single goal, ignore the others, and attend only to factors that might optimize the attainment of the single goal. If the demands of teaching were such that a teacher had one goal (e.g., achievement in arithmetic) and one pupil, it might be possible to profit from research on behavioral performance alone, although there is reason to be doubtful here as well. But the point is that because teachers have, in fact, *multiple* goals and *multiple* students, they are prohibited from optimizing outcomes. Instead, they are required to continuously exercise judgment regarding the most effective and ethical means of maximizing gains across multiple goals and across multiple students. Time remains constant and attention to one student reduces the available time and opportunity for attention to other students; similarly investment in attainment of one goal reduces the available time and opportunity for attainment of others. Teaching therefore, is simply too complex for linear prescriptions about effective teaching behavior. The exercise of professional judgment is necessitated by the need to decide what, when, how, how long, and with whom are particular subjects and actions appropriate when seeking to achieve simultaneously, multiple goals for many different students.

The research on teaching community was not alone in coming to realize that the behavioral paradigm was limited in terms of its prescriptive power, however, for the teacher education community was also coming to realize the limitations of its behavioral emphasis. The competency/performance-based movement that swept the country across the late sixties and early seventies paralleled the behavioral emphasis in research on teaching (Gage & Winne, 1975). Everything worth knowing was broken down into discrete behavioral objectives that could be clearly specified, counted, and related to behavioral performance outcomes in teaching.

The specification of performance-based behavioral objectives went on with great enthusiasm across the late 1960's and throughout the 1970's, until the lists became unwieldy and appeared to have no end. Teachers could indeed be trained to do most anything, but the endless lists of behavioral performances lacked coherence in terms of their overall relationship to the preparation of more effective teachers. Questions thus came to be raised by teacher educators as well as researchers, about more appropriate knowledge and skills that should be made available to teachers.

THE PROFESSIONAL DECISION-MAKING OF TEACHERS: RESEARCH AND PRACTICE

It is important to note that research on teaching and practice in teacher education that emphasizes the cognitive aspects of teacher judgment and decision-making has emerged quite recently. The National Institute of Education created the Institute for Research on Teaching in 1976 and charged it with the advancement of research on the thinking and information processing aspects of teaching. Involving an interdisciplinary cadre of researchers and teacher collaborators, the IRT designed and continues to conduct research that seeks to enhance knowledge and understanding of teacher judgment and the numerous factors that influence decisions and actions in teaching. The IRT is also responsible for training additional researchers who can become qualified to conduct this relatively new line of inquiry. Researchers at the Institute for Research on Teaching are now pursuing questions related to the following:

(1) the information teachers use and interpret as they diagnose and prescribe remedial interventions for youngsters with apparent reading problems.

(2) the knowledge and information teachers use in selecting the content they come to cover during mathematics lessons.

(3) the different instructional decisions and actions that are taken when teaching lower-level courses in mathematics versus more advanced courses.

(4) the knowledge and information teachers draw upon and apply in planning and conducting lessons intended to improve youngsters' writing abilities.

(5) the insights, perceptions, beliefs, and actions of teachers who appear to work most effectively with problem youngsters.

(6) the knowledge, information processing, and actions teachers employ when teaching important concepts in science, reading, and language arts.

(7) the insights, beliefs, and information teachers use when emphasizing student learning of appropriate classroom conduct and deportment.

(8) the perceptions and interpretations teachers from various sub-cultures employ when interacting with youngsters of diverse ethnic and social backgrounds.

(9) the knowledge and perceptions prospective teachers bring to and acquire from their own formal preparation as teachers.

The thrust of all these lines of inquiry is (1) to better understand the complex information processing that occurs in teaching, and (2) to trace its antecedents and potential consequences for teacher and student learnings and actions.

Work underway at the Institute for Research on Teaching and in other institutions across the nation and world appears to hold promise for significantly greater understanding of the complex demands and requirements of teaching. Recent findings have been reported and reviewed and have received widespread attention for their apparent contributions to better understanding and improvement of teaching practice (Brophy, 1981; Clark & Yinger, 1980; Duffy, 1981). But the existing knowledge base is understandably small at this time, since the new line of research is both recent and limited by modest investments of human and financial resources. Hopefully, the situation will change in coming years as the importance and sophistication of research

on thought and action in teaching becomes better understood.

Although advances in the practice of teacher education should be strongly influenced by the accumulation of empirical knowledge that is gradually being acquired on the cognitive aspects of teaching, teacher educators need not depend totally on available research evidence. Like the research community, thoughtful and analytical persons concerned with teacher education have become aware of the limitations of overly simplistic, technical and behavioral orientations toward teaching.

The Emerging Profile of Effective Teaching: An Introduction

The observations that follow are meant to stimulate thought and discussion relative to increased effectiveness of schooling, teaching, and teacher education in the United States. The argument is made that today's schools have come to need *professional* teachers if they are to better serve the public that supports them. Similarly, today's teachers desperately need the capacities of professionals if they are to realize sufficient rewards from teaching and cope effectively with demands for school improvement. In order to remedy the acknowledged problems of public education, the technician role that has been assigned to and assumed by teachers and the technician training that has been provided by schools and colleges of education needs to be changed. Although contemporary discourse among teacher educators includes references to preparing "professionals," the content and process requirements of most preparation programs suggest that the concept of "professional" is either not well understood, or is simply used as rhetoric to achieve an illusive sense of status and importance. This section begins, therefore, with a description of the requirements of professional work.

The remaining portions of the paper address the reasons why professional teachers are needed. The argument is made that the American public has come to hold multiple expectations for schools. These expectations have not been satisfactorily met in the eyes of the public, and a general disillusionment with the education establishment has resulted. Further, most attempts undertaken to remedy the apparent problems of schools have been basically flawed, as they have slighted the centrality, importance, and integrity of teachers and teaching. An unanticipated consequence of the top-down, management-dominated school improvement effort for today's career teachers has been a decrease in their sense of responsibility for the outcomes of schooling and a loss of satisfaction in their work. Facing an already difficult and increasingly complex assignment, and then denied the intrinsic rewards that come from self-initiation, problem-solving, and the exercise of professional judgment, teachers look more and more to extrinsic rewards and alternative employment.

The final section of the paper addresses the needed changes that must occur in teaching and teacher education if we are to improve the functioning of schools and concomitantly attract, prepare, and retain qualified professionals to work in them. The case is made that school improvement is dependent upon the professionalization of the teacher's role, and such professionalization cannot be realized until teacher education programs change their predominantly "technician training" approach to that of "professional preparation."

Technical teacher training vs. professional teacher education. The claim that past and present practice in teacher preparation is primarily directed toward technical training, and that future practice should come to be directed toward professional

education must be elaborated, if the reader is to critically examine the underpinnings of the assertion. At the base of the argument is the distinction between technical and professional work.

Technicians, by definition, are "specialists" in the practical details of an occupation. They require their practical know-how from on-the-job training that is relatively brief and typically facilitated through apprenticeship arrangements. Technicians are prepared to follow the prescriptive directions of engineers or managers who provide oversight for the technical performance they provide. Thus, prospective teachers receive technical training for teaching when the predominant portion of their pedagogical studies is comprised of on-site field experiences, how-to-do-it methods courses, and practice teaching. One or two discrete courses in foundations (be they psychological, sociological, or philosophical) do not counterbalance the heavy emphasis given to the technical training that presently encompasses the bulk of the study in education required by typical teacher-training programs.

Experience suggests that contemporary teacher training emphasizes the need to learn and demonstrate smoothly orchestrated behavioral routines in rather predictable classroom environments, for example: how to write acceptable objectives, usually implying form, not substance; how to design a unit or lesson plan without deep, prior knowledge of a student group; how to be efficient in the use of time and keep distractions and transition-time from one teaching activity to another at a minimum; how to prepare bulletin boards and operate various projectors; how to organize the classroom and arrange student working roups; how to call on students and keep order; how to correct, grade, record, and display students' work; how to adjust to school routines; and, how to get along with one's peers, especially the supervisor or principal. The emphasis tends to be on practical know-how. This heavy emphasis on practical technique conveys to the prospective teacher (perhaps unintentionally) that knowledge and decisions about highly important matters will be left to someone "higher up" in the system. Contemporary teacher training appears to give meager attention to the need to learn and apply serious thought and analysis for making difficult judgments under conditions of uncertainty: for example, deciding on important and specific content that must be purposefully selected from a wide array of content possibilities; deciding how much instructional time it might deserve under varying conditions; arranging content into a logical and/or psychologically intriguing sequence for diverse groups of learners; selecting from and deciding upon various means of monitoring student progress, so that effective feedback and subsequent decisions regarding new or revised learning tasks can be appropriately related. Surface attention to the in-depth knowledge required for exercising sound judgments on such matters implies that the *real* decision-makers are the specialists, publishers, and administrators who determine schedules, create curriculum guides prepare and select text-books and tests, and devise management systems for teachers. The exercise of *teacher* judgment, within the broad policy framework of standard curricula and instructional practices, receives insufficient attention. Thus, teachers come to enact the role of technicians, a role that requiries them to follow the prescriptive directions of managers.

In addition, as with most technical training, the training period in pedagogy is relatively brief, i.e., three or four courses for prospective secondary teachers, in addition to their practice teaching. Though admittedly more for elementary than

secondary teacher candidates, the investment and time required for a college student to "pick up" the additional course work needed for obtaining a teaching certificate (beyond the standard major and minor requirements expected of *all* college students) is clearly small. It is not uncommon, in fact, for education programs to advertise their modest academic requirements and the ease of program access and completion. Many even point out and take pride in the fact that their preparation is obviously useful for many other occupations, thus implying that their knowledge base is not one of in-depth specialization for teaching in schools.

Professionals, in contrast to technicians on the other hand, possess a broad body of specialized knowledge and skills that are acquired during a prolonged period of education *and* training. Drawing from their broad specialized knowledge base, and guided by general principles, propositions, and ethical commitments, professionals exercise judgment and make decisions that apply to the unique and particular situations they encounter in practice. Professionals therefore accept responsibility for making decisions that are in the best interests of the members of society they serve. Professionals realize that they have autonomy of judgment in regard to their performance, within the general context of regulations and policies that are set by the institutions society creates for the facilitation of their work (Schein, 1972). A professional education, therefore, is characterized by three important qualities: (1) it provides students with a broad, in-depth, and specialized knowledge base that must be acquired through long and intensive academic preparation; (2) it structures a set of requirements and a social milieu that communicates an exceptionally serious commitment to the members of society to be served, and the standards and codes of conduct that must accompany the professional work itself; and (3) it focuses on the ways and extent to which professionals have authority and responsibility to make and act upon their own decisions, within the context of the social institutions created for their work. A professional education for teachers, therefore, would necessarily include serious attention to the breadth and depth of the knowledge base that is related to teaching, learning and schooling. It would also include general knowledge regarding the purpose and operation of various education-related systems (i.e., not just classrooms and schools, but other social entities like communities, families, and peer groups). It would include major attention to principles, theories, and propositions which the professionals should draw from and apply to the variable, particular situations they will encounter in practice.

The standard "but there is not enough time" response that is typically used as a scapegoat for why this is not the case in teacher education simply does not hold. Regardless of what little time happens to be available for initial preparation, it could be used to *begin* professional education, which could be continued following initial certification, *rather* than substituting it with technical training. Thus, it is possible. But the question still remains: Is professional education really needed?

Why teaching professionals are needed. Professional teachers who have in-depth knowledge about education and pedagogy, a serious commitment to their work, and a clear understanding of their authority and responsibility to make and act on important decisions are needed because teachers cannot effectively cope with the public's multiple expectations and the unique needs of diverse youngsters by continuing to assume a technician's role. Although the argument is somewhat detailed, it must be

considered in light of past and present expectations, problems, solutions, and failures in the functioning of America's schools.*

The Functions of Schools

Over the course of the past two centuries, United States citizens have come to expect four primary functions of public schooling: They expect schools to facilitate (1) academic learning, (2) social integration, (3) custodial child care, and (4) personal and social learning. While these functions have emerged over time, there have been persistent expectations for the roles of teachers as the primary agents for achieving them. So sure are we of the appropriateness of these functions that when there is public dissatisfaction with schools, it is attributed to their failure to achieve one or more of these functions at an acceptable level. There has never been a realistic reconsideration or redefinition of the complex set of functions and numerous tasks that accompany them (Sizer, 1973), though people regularly decry the fact that schools are attempting to do too much.

When formal schools were organized during the Colonial period, the expectations for teachers were relatively clear. The clientele were primarily white males from families of the wealthy, learning to read for purposes of studying the Bible and learning "to figure" for purposes of computing their plantation and business profits. There was little or no controversy over limiting public school teaching to these "basics."

But following the Revolution and Constitutional period, a second legitimate purpose of American schooling emerged. Stimulated by Jefferson's views, education was expected to serve the noble purpose of removing artificial barriers determined by birth and social background to enable one to serve the public good. Through appropriate schooling, "those persons whom nature hath endowed with genius and virtue" (Tyack, 1982) could achieve the social status that matched their talents. This meritocratic view of the American school as an instrument for achieving equality of opportunity gained momentum and strength across the centuries. Horace Mann held this view so strongly that he described formal education as "a great equalizer of the conditions of men, the balance wheel of our social machinery." He believed that adequate public schooling "does better than disarm the poor of their hostility toward the rich: It prevents being poor. . ." (Husen, 1979).

The advent of the child labor laws of the mid-1800's brought more and more of America's poor children out of the factories and into the schools. The parents of the poor were eager to have their children acquire learning that could get them out of the bondage of poverty. But they also had a very practical reason for supporting their children's school attendance. Since both parents of most poor children usually worked long hours for low wages and they had now lost the income from the labor of their children, the public school was needed to provide free child care. The school could serve both an educative *and* a custodial function; the custodial function meeting their immediate needs and the educative function their long-range aspirations. By the early part of this century, then, the schools were seen as serving at least three major functions: providing instruction in basic literacy, providing an education that would

*This argument was developed by Drs. Judith Lanier, Susan Melnick, and Robert Floden as a part of their planning for major revisions in the professional studies component of Teacher Education Programs at Michigan State University.

encourage upward social mobility, and providing safe and healthy child care for working parents.

But in the early 1900's still more came to be expected of the schools. Recognition grew that children were more than simply "short adults." Children were complicated beings and their development deserved unique study an special consideration. The progressive education view brought a shift in the subject-centered notion of schooling to that of a child-centered notion. Schools and the educators in them were to provide knowledge and skills that would meet the child's "real" needs. The "life adjustment" of each youngster was to be carefully considered as schools sought to match instruction to the appropriate level of the child's development.

However, added pressure for response to the uniqueness of youth was not the only force raised at this time. Dissatisfaction with America's apparent inability to live up to her stated democratic ideals led to increased pressure on schools to help the country realize the promised benefits of democratic life. George Counts (1932) and other social reconstructionists pushed for the schools to create "a new social order" rather than to adjust to an existing imperfect one. Two decades later, Robert Hutchins (1953) and other anti-pragmatists brought widespread attention to another set of expectations that was formerly implicit in McGuffey's *Reader*. The teaching of *values* came to be consciously accepted as an appropriate function of the schools whether it was the character, work, thrift, family, and national pride values exemplified in McGuffey's book or the "habits, ideas, and techniques that they need to continue to educate themselves" as was urged by Hutchins. This view pressured schools to go beyond the expectations related to basic skills, child care, and poverty antedote. In short, these collective pressures brought an additional expectation that the schools could and should foster constructive personal development and social responsibility.

Thus, by the middle of this century, the American public held a set of diverse and high expectations for its schools. These public institutions were to assume responsibility for assuring that all of America's young people: (1) were helped to become functionally literate; (2) were helped to become sufficiently knowledgeable and skillful that they might avoid poverty and participate fully as equal members of the social order; (3) were taken care of in the parents' absence, in a safe, healthy, and constructive manner; and (4) were helped to acquire habits of personal development and social responsibility that would result in a continued and dedicated effort to improve themselves and existing social conditions. Since this massive charge was accompanied by public sentiment that the United States could realize whatever goals it set, there was little doubt that the schools could rapidly and successfully achieve these noble ends.

The Problems and Disappointment: Recent Criticisms of Schooling

But the post-war baby boom had obvious and massive consequences for our schools and the education community. The shortage of qualified professionals, school buildings, and adequate resources drove the education establishment into a frenzied set of responses to accommodate the demand. The knowledge explosion brought more things to be taught to greatly increased numbers of students. The population shifts to the cities, combined with rapid changes in traditional institutions and human values, left the schools, like the society that created them, in a state of confused direction. And in the midst of unprecedented growth and social change, the schools were not able to

mobilize effective responses to their multiple charges.

With little opportunity to reflect on the causes or inherent nature of their problems, and no organized way of responding to the public's frustration with their increasingly apparent failures, professional educators watched their respectability and credibility deteriorate.

Critics such as Bestor (1953) and Rickover (1959) decried the deterioration of basic skills and intellectual rigor on the part of students *and* teachers. The spectre of Sputnik I convinced the public that the critics were probably right. Children were not learning academic subject matter up to the standards of the changing society, and, thus, the schools were not performing this central function. Other criticisms of school failures also came to public attention.

With a growing recognition that schools operate within a sociocultural context, it became clear that the school was not succeeding as the great social equalizer of opportunity. As a status-providing, liberating instrument, the school was failing to keep its promise of potential success to unlimited numbers of young people. Some critics claimed that the schools were purposely working against the American Dream of equal opportunity. Instead, they were succeeding in reproducing the existing social and economic order — operating to sort and sift young people in ways that would distribute status and economic benefits and, thus, maintain social and economic inequities.

The school's ability to deliver healthy and safe custodial care also became problematic. As social rebellion, drugs, vandalism and violence became more prevalent in society, they became more common in schools. Educators were unable to prevent or remedy the increasing number of disruptions and problems. The Gallup polls consistently showed that the public's major concern with schools and teachers was their inability to adequately provide for students' personal safety and welfare.

The schools' inability to assure the development of personal competence and social responsibilities also became clear. Unable to provide mastery of basic literacy skills, they could hardly prepare young people to become independent, critical and responsible citizens, ready and able to exercise their rights and duties as members of a complex, democratic and pluralistic society. The changing nature of families, religious institutions, community life, and the mass media all competed with the public's increased dependence on the schools for better social understanding, values development and career education. But the failure of the schools to seek a balance with competing factors and to achieve their noble goals was pervasive; and the subsequent disillusionment was felt and generally recognized.

In the 1970's, and into the 1980's, the public seemed to be abandoning the public schools. Accompanied by growing problems in the economy and a major decline in population growth, the schools' supporters began to cut back on the base of tax support. Community bond and millage requests were rejected in increasing numbers. Parents turned to private schools, and enrollments in these schools grew as the enrollments in public schools declined.

Attempts to Solve the Problems: The Expert Response

Through this period of criticism of the public schools, attempts to improve the schools were made on local, state, and national levels. But the public responses to the problems of schools typically had two important characteristics. First, although various groups of experts were asked for proposed solutions to the problems of schooling,

these groups did not include classroom teachers. And, second, the solutions proposed involved teachers only as technicians to carry out the solutions devised by the experts.

Consider those who typically spearheaded the public responses to problems of schooling: private foundations, the federal government, or publishing companies. They would bring together a panel to devise plans for school and educational reform, a panel on which teachers were seldom members. While the means of getting teachers to carry out the plan varied, the *passive* role assigned to teachers did not. Government demanded teacher compliance through legal mandates and regulations. Publishing houses devised "teacher-proof" curriculum materials to ensure that teachers would faithfully follow the model for reform. The strategy of expert solution and teacher implementation can be seen in responses to failures of schools in each of the four major functions.

Criticisms of schools' performance in teaching academic subject matter were widely publicized, and the responses to these criticisms often had comparable visibility. Many of the curriculum development projects sponsored by the newly formed National Science Foundation boasted Nobel laureates on their steering committees. If the committees also included public school teachers, their presence was scarcely noticed. In science education, top scientists were assembled to redesign the teaching of elementary and secondary school science.

In mathematics, the influential Cambridge conference specifically excluded teachers from deliberations about the best ways to redesign mathematics teaching. The assumption was made that whatever curriculum the university mathematicians devised could be taught with minimal additional teacher training. But the conference planners' hope to eventually deal with the practical problems of teacher education was unfortunately seldom realized. Instead, the conference recommendations were incorporated into curriculum projects, whose books were then adopted by school districts with only limited provision for problems a teacher might have teaching the new curricula.

Likewise, concerns related to equal educational opportunity were often attacked through the development and attempted implementation of plans designed by experts. In early civil rights litigation related to education (beginning with Brown v. Board of Education), judges heard expert testimony before deciding on the appropriate way to remove sources of racial and ethnic discrimination from the school system. Teachers played little part in developing these solutions, but were expected to carry through the spirit of legal mandates in their newly integrated classrooms. More recently, civil rights were explicitly extended to the handicapped. The major education law extending these rights to the area of education, PL 94-142, was developed through consultations with various expert groups, with teachers having little say. In fact, teachers have no rights specified in the law, in contrast to parents, students, and school district administrators. Yet teachers are expected to implement each of the specific provisions of the law.

Another aspect of the public response to school failures to promote equity were the numerous government and foundation-supported efforts to improve the education of the poor (e.g., Title I of the ESEA of 1965). Federally-and-foundation-supported curriculum development projects were designed to give teachers something to teach to the so-called "disadvantaged;" again, experts were called in and supported for research that was aimed at finding out how teachers should teach those materials. But,

again, no systematic effort of relating the findings to inservice or preservice teacher education was provided.

The problem of lack of proper care for students was also attacked at the national level by devising expert solutions and telling teachers to implement them. The "safe-school" studies attempted to determine what approach should be taken to reducing school violence. The federal government also required teachers to implement their approaches to improving the health of students, through government-designed health and nutrition programs such as those that were part of Projects Head Start and Follow Through.

Attempts to improve the way in which schools develop personal and social responsibility often fall into the area of social studies education and health education. The federally sponsored development of the curriculum, "Man: A Course of Study," embodied an attempt to give teachers specific ways for teaching a particular set of values. In this case, Congress disavowed the government's intention to promote this set of values in all classrooms. Large sums of money were poured into development of drug-education curricula to give students a stronger disposition to take responsibility for their own actions. Here, as for the other functions of schooling, teachers' roles were as technical *implementers* of someone else's ideas for improving the schools.

Though these examples have focused on the national response to problems of schooling, the same phenomena have been observable at state and local levels. In each case, teachers are presumed to lack good ideas for school improvement, but to have the willingness and ability to carry out reforms devised by others.

These attempts to improve schools have had disappointing consequences at best. Rather than list the failures in each area, a representative description of the failure in the area of academic learning will illustrate that broader pattern. Talking of the curriculum reform movements in science, Welch (1979), concluded:

> In spite of the expenditure of millions of dollars and the involvement of some of the most brilliant scientific minds, the science classroom of today is little different from one of 20 years ago. While there may be new books on the shelves and clever gadgets in the storage cabinets, the day-to-day operation of the class remains largely unchanged. (p. 303)

In other areas, as well, the reform movements are seen as failures. While the cause of the failure is variously attributed, it is clear that the simple model of teacher implementation of experts' solutions is inadequate and inappropriate to solve the apparent problems of schooling.

The Problem with the Improvement Strategy: The Inverted Pyramid

The public responses to problems of schools have generally followed a model in which decisions are made by some central authority, then passed along the chain of command until they are carried out by teachers. Like foot soldiers in the army (and especially "in the trenches"), the teachers' role has been to follow orders, not to make decisions. In this model, questions of school improvement center around questions of (1) *what teachers should be told to do* and (2) *how they should be made to do what they are told*. The events of recent history have shown that this model operates poorly.

A more effective model of school improvement might center around questions of (1) what knowledges, commitments, and support systems teachers need to make schools better able to fulfill their functions; and (2) how they could share authority *and* responsibility for the improved functioning of schools. The "tell-teachers-what-to-do"

and "see-that-they-do-it" model supports a technician role for teachers, rather than a professional decision-making role. This "top-down" approach to school improvement seems to contain an inherent set of disfunctions that consistently and predictably contributes to the inability of today's schools to effectively accomplish their noble ends. Such a possibility must be seriously considered.

The "teacher-as-technician" model assumes that a hierarchical system of authority can be made to operate effectively in schools. This assumption may be in error since a number of the conditions necessary for an effective hierarchical system of authority are simply not present in schools. In a successful hierarchical system, persons in positions of authority have (1) sufficient knowledge of the situation to formulate reasoned and constructive directives, (2) sufficient power to enforce the directives, and (3) sufficient resources and opportunity to provide oversight and instruction to those who must carry out the directives. Furthermore, those persons who are expected to carry out the directives must (1) be able to understand the directives, (2) be able to do what the directives require, and (3) see the directives as being in their own self interests *as well as* in the best interests of the organization. These necessary conditions are lacking and thus prohibit successful operation of the top-down authority structure in schools. The hierarchical authority system that predominates in today's schools is referred to in the literature as "bottom-heavy" and "loosely coupled." The notion of "bottom-heavy" means there are many more persons at the bottom of the organization than there are above. Although this notion is reasonably well understood, the magnitude of this "bottom-heavy" characteristic is often underestimated.

When people imagine or illustrate the top-down, bottom heavy system of authority that exists in schools, they typically envision something like the illustration on the left of Figure 1. The problem with such a view is that it does not capture the magnitude of the "bottom-heavy" reality. If the bottom-heavy reality were conveyed by an illustration showing the *actual proportion* of teachers to administrators, it would look like the illustration on the right.

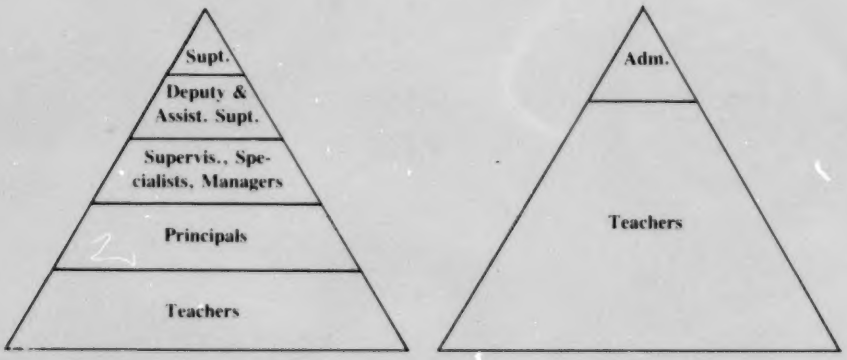

Figure 1. Right-hand portion drawn to scale, indicating proportion of teachers to administrators in 1970 (122,000 administrators and supervisors to 2,131,000 teachers).

One can readily see that the small number of authorities (administrators and supervisors) compared with the large numbers of teachers prohibits their having sufficient knowledge of the many teaching-learning situations to formulate specific, reasoned directives. The problem is exacerbated by the fact that most teachers are isolated in separate classrooms with diverse groups of youngsters. Centrally made directives thus become difficult, if not impossible, to enforce. If we were to be even partially assured that directives were being followed in practice, the number of supervisors or administrators would have to be increased many times. The magnitude of the bottom-heavy system makes the cost of adequate regulation and monitoring compliance obviously prohibitive.

"Loosely coupled" means that the chain of command has many loose links. It is difficult for principals to closely monitor what teachers do in their classrooms. Hence, teachers may act quite differently than their principals think, whether through unclarity of the request or through resistance. In a system in which rewards are linked to seniority rather than performance, the principal has few ways to enforce requests, even if knowledge about each classroom were increased. Similarly, the strength of control of superintendents over principals, or state education agencies over school districts, is much less than the military metaphor suggests. Decisions made centrally may or may not be carried out by classroom teachers.

Second, even if teachers were eager to do no more than carry out explicit administrative directives, that option is not usually open to them. The directives teachers receive are often too vague to give specific guidance for classroom practice. Since the directives cover a wide variety of different areas and are designed to achieve multiple goals, they also often conflict with one another (e.g., as when teachers are told to spend more time on direct instruction at the same time they are told to increase the amount of testing and record keeping). When vagueness, multiplicity and contradiction are coupled with the limited time available to carry out the multiple directives, it simply becomes impossible to follow orders. Teachers must choose for themselves which of the directives to carry out, and they must interpret the implications of the chosen directives in actual classroom practice. It is ironic that the use of a model based on teachers' following orders has led to a situation in which teachers *cannot possibly* "just follow orders." The multiple, conflicting, vague demands cannot be blindly followed. Teachers must, and do, decide what policies to follow and how to interpret those policies. (For more thorough discussion, see Schwille, Porter, et al., in press).

Finally, even if teachers *could* be centrally directed, it is unlikely that any central directive would be appropriate for all classrooms. Classrooms vary enormously in the characteristics of the students, of the teacher, and of the surrounding community. A directive that produces excellent results with one group of students is unlikely to produce similar results with another. Rather than implementing a standard policy in all classrooms, a reform must be modified to fit the particulars of each classroom, if the reform is to be broadly successful.

Thus, we believe that there are serious flaws in the model of school improvement that is based on a hierarchical model of top-down authority directions. The school personnel system that predominates today is described as "bottom-heavy," with a pyramid drawing used to illustrate the teachers at the bottom and the chief central administration at the top. Decisions are made at the top and transmitted down the chain

of command to be carried out by the teachers at the base of the pyramid. The natural interpretation of such a diagram is that the persons at the top are the most important, and the goal is to make the bottom parts of the pyramid best serve the wishes of the top.

This perspective on the schools can be changed by inverting this pyramid, placing classroom teachers at the top, and putting the administration at the base (see Figure 2). In this view, teachers are regarded as the most important people, a portrayal consistent with the fact that they are closest to the children and must make decisions about what goes on in their classrooms. If well educated, teachers are also in the best position to assess needs and design educational strategies best fitted to the specific characteristics of individual classrooms.

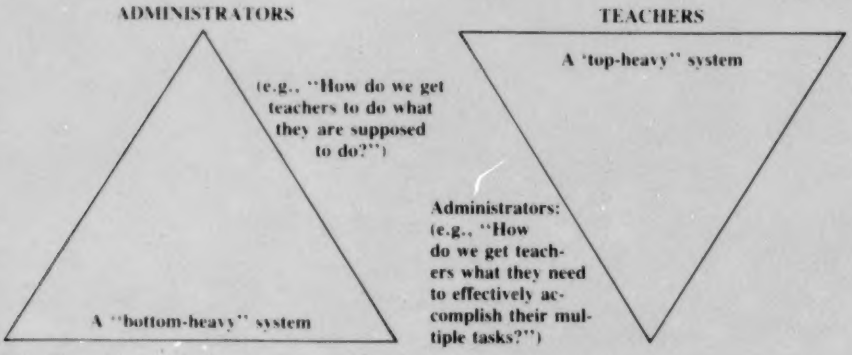
ADMINISTRATORS
(e.g., "How do we get teachers to do what they are supposed to do?")
A "bottom-heavy" system
TEACHERS
A "top-heavy" system
Administrators: (e.g., "How do we get teachers what they need to effectively accomplish their multiple tasks?")

Figure 2.

With this changed perspective, administrators and supervisors would come to view their responsibilities somewhat differently. They would define their roles less as authority figures and more as capacity builders. They would work to enhance the professional judgment and capabilities of teachers as they carry out the important functions of schools through direct interaction with youngsters.

Teachers *are* making decisions about the operation of schools, and renewed efforts to wrest those decisions from the hands of teachers and have them made centrally are bound to be futile and harmful. One of the clear problems of past attempts to improve schooling lies with the top-down model of change and the technician role assigned to teachers. It is *not* simply a matter of inadequate attempts in carrying out the model; and therefore a new perspective on school improvement and teacher education must be taken.

The Requirements of Professional Teaching and Teacher Education

Three categories of important characteristics of teachers and schools are suggested: teachers' knowledge; teachers' capacity to make and act on decisions; and teachers' commitment to take their decision-making role seriously. Each of these categories describes how teachers and their schools must be to make the best use of the people who have the greatest impact on learners.

If teachers are to improve the functioning of the schools through bettering their classroom decisions, they need to have a firm understanding of classroom processes, their impact on students, and their relationship to the functions of schooling. Though

many things contribute to good decision making, *in-depth knowledge of the factors and processes relevant to the alternatives to be considered is crucial*. A decision made in ignorance, or on the basis of meager or inaccurate information, can hardly be expected to lead to the solution of difficult problems. To make better judgments about teaching academic subject matter, teachers must *know* about the subject matter, its pedagogy, and its relationship to the individual's role in society. Having in-depth knowledge *about* subject matter requires going beyond simple knowing about information that has come to be accumulated (e.g., empirical facts and various interpretations of them as they relate to certain topics like World War I, biological evolution, or Renaissance Art). Rather, knowing about subject matter requires rudimentary understanding of how knowledge is acquired in a particular field and how it evolves and grows as systematic inquiry and rules of evidence are applied and evaluated for their apparent integrity and value. It requires knowing that knowledge in a field is dynamic and how continuing decisions must be made relative to priorities for learnings that are judged most basic and most needed by an ever changing society. Similarly, to promote social integration and educational equity, the teacher must understand past and existing problems related to equity, understand what would contribute to their solution, and what role the schools can reasonably play. And so on for the other functions.

To make better decisions, teachers not only need in-depth knowledge, but must also have the *autonomy* required to make decisions and to act on those decisions. It is argued that all teachers must make some decisions among the various competing demands placed on them. The value of these decisions will only be realized if teachers are permitted and encouraged to make important pedagogical decisions that go beyond what would be considered appropriate for "just" any smart and kind person who was following managerial directives. Teachers need to be prepared for and expected to exercise informed judgments and make important decisions within the framework of broad institutional policy guidelines. Further, teachers need to know that their decisions will not be reversed or interferred with, except on the basis of very serious grounds. The autonomy to carry through on decisions is particularly important in education since the short-term effects of teaching are uncertain and somewhat unpredictable. Hence, the temptation is great to call for a new strategy too soon, just because the effects of the initial strategy are not apparent. Yet is likely that the dedicated adherence to a given plan will be more effective in the long run than a series of different strategies. If teachers are to make such commitments to their decisions, they must know that they will have the right to continue with modest interference. To maintain this autonomy, it is helpful to have a community of colleagues who understand the difficulties in teaching and share the conviction that one must resist the temptation to change courses at the slightest provocation.

Finally, for teachers to be professional they must be willing and able to give proper weight to the important decisions they must make. It is difficult and time-consuming to make good decisions. It requires reflection on the particulars of the classroom situation and on the probable consequences of a course of action. Given the other constant demands of the job, a teacher must take the time and have the energy to reflect on decisions made and on decisions to be made. Doing this is bound to require more time outside the classroom than teachers are sometimes able to provide. Teaching becomes more than a nine-to-four job. Teachers must constantly push to make the extra

effort required to reflect on past performance, and on the consequences of future performance. This *commitment* to careful decision-making must also be a commitment to put the needs of learners above teachers' personal advancement. The improvement sought is assessed in terms of the functions of schooling, and these functions do not place the personal welfare of teachers in the foreground. Hence, if teachers' decisions are to improve the way schools achieve their functions, they must also place those functions, and consequently the students and the community, ahead of their own personal interests. Collective teacher action, as well as individual teacher action, must come to emphasize these commitments so that the public recognizes this sincere concern for learning and schooling and becomes eager to provide the support systems needed to realize a truly professional role for teachers.

This picture of what it would take to use teachers' classroom decisions and judgments to improve the functioning of schooling has emphasized teachers' broad and in-depth knowledge, autonomy, and commitment; the concept that encompasses these characteristics is *professionalism*. To say that teachers should be professional implies, under this common definition, that teachers should be highly *knowledgeable, autonomous, and committed*.

Programs of teacher education that claim to prepare persons for professional roles, therefore, must adjust their offerings accordingly. More time than is presently available for teacher education must come to be systematically arranged. But time alone is not the key, since a five or six year training program could continue to afford preparation for a teaching role that is primarily technical in nature; an eventuality that will likely perpetuate the problems in our schools and continue to drive talented teachers into more intellectually challenging and responsible occupations. Practice in teacher education must come to afford opportunities to acquire broad and in-depth knowledge and opportunities to develop understandings and attitudes about teaching that foster a serious commitment and responsibility for informed teacher judgment and decision-making. Pedagogical studies, such as the newly developed programs at Michigan State University, will increasingly reflect this professional orientation.

Summary

The needed research and practice that will most likely enhance teacher education in the future will be grounded in a profile of the effective teacher that acknowledges the professional requirements of the "school teaching" occupation. While some teaching requirements will always contain aspects of performance that are labor-like, craft-like, and artistic in nature, the research and teacher preparation programs of the future will increasingly focus on the knowledge and information processing skills that are requisite to informed professional decision-making. Such knowledge and skill will be related to the complex interplay of teacher judgments that are required for effective response to the multiple and diverse youngsters that attend school. In addition, the knowledge and skills that are deemed important to professional teaching will also acknowledge and reflect the multiple and competing functions that schools are expected to serve. By framing future practice in teacher education and future research on teaching on the requirements of professionals, we should come to improve the effectiveness of schools and the public's conception of effective teaching.

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CURRICULUM ISSUES IN THE PREPARATION OF TEACHERS[1]

Dean Corrigan*

To set a context for discussing teacher education, consider the following assumptions concerning the importance, organization and curriculum of teacher education:

The importance of teacher education

1. The education of a society can rise no higher than the qualifications of its teachers. To ignore or neglect the role of teacher education is to ignore the intellectual future of a country itself.
2. Unless men and women of intelligence, spirit, capacity for leadership, and devotion to human service are drawn into teacher education and into the schools, very little can be expected of education.
3. Teaching is a matter of life and death. The tragedy is that most people do not recognize the life and death nature of teaching. Every moment in the lives of teachers and pupils brings critical decisions of motivation, reinforcement, reward, ego enhancement, and goal direction. Proper professional decisions enhance learning and life; improper decisions send the learner towards incremental death in openness to experience and in ability to learn and contribute to society. From this perspective, doctors and lawyers have neither more or less to do with life and death than do teachers. Indeed, if we do not prepare quality teachers we are not going to have quality doctors or lawyers, or, for that matter, quality engineers or musicians. Because teaching is a matter of life and death, it must be entrusted only to the most thoroughly prepared professionals.

Organization and development of teacher education

4. Teacher education is the *preparation* and *research* arm of the teaching profession. The profession will only be as strong as that arm.
5. Organizationally, the teacher education program operates best when established as a professional school or college on the campus. Even though the teacher education unit draws upon the resources of the total university, like other professional colleges, it must have the authority as well as the accountability and responsibility for professional education. What is everybody's responsibility is nobody's responsibility.

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[1]Adapted from a paper delivered at the World Assembly of the International Council on Education for Teaching, Rome, Italy, July 22, 1982.

6. Teacher preparation is most effective when it is campus based and field oriented. To be effective, teacher education must be a collaborative effort which involves the university, the organized teaching profession, and the operating schools and school systems, including their communities.

The curriculum for teacher education

7. The process of educating persons to be teachers transforms them from lay citizens to professional educators. The role performance abilities of the prospective teacher will be importantly altered during the preparation process.
8. While recognizing the importance of a liberal education and of specialization in one or more teaching fields, nothing should obscure the fact that the difference between an educated person and a professional teacher is pedagogy — the science of teaching.
9. A profession, to be worthy of the name, must possess a clearly defined common body of knowledge, values, and a repertoire of skills essential to professional practice (professional culture).
10. The life space (time, resources, access to university faculty) necessary to teach prospective teachers what they need to know and do to be competent professionals must be provided.
11. Quality controls to insure that graduates of teacher education programs possess the essential knowledge and skill to be "safe to place with clients" at the point of entry into the profession must be established and enforced. The teacher education program must include the means for screening and selection. Becoming a teacher is an earned privilege not just an individual choice. Assessment criteria and procedures should be in place at a number of points in the preparation program which give teacher candidates an opportunity to demonstrate their professional qualifications. Governance structures, institutional accreditation and individual certification and licensing policies and procedures must be developed, monitored and supported by the profession itself.
12. Teacher educators have an obligation to exemplify what they explicate. The professional college or school can be no less than a model of the best educational practice known to the profession and society.

While there are many curriculum issues confronting teacher educators today, I will focus on just two issues that I believe are critical:

1. *Professional knowledge base*. How can we get the teaching profession and its training arm to identify, accept and teach a common body of knowledge, skill and professional values essential to the practice of teaching?
2. *Quality controls*. How can we get the profession and other collaborating agencies to establish and enforce "quality controls" which are needed to insure that beginning teachers possess the required knowledge, skills and values which make them "safe to place with clients" at the point of entry to the profession?

Indeed, if we are unable or unwilling to deal with these issues teaching will not become a "real" profession.

ISSUE #1, KNOWLEDGE BASE

Three essential questions are being asked today about the content of teacher preparation programs. They are: (1) what should a beginning teacher know?, (2) what should a beginning teacher be able to do? and (3) what is the state of the art of the knowledge associated with teaching and learning?

A strong case can be made that the social science research literature associated with teaching and learning is better and more consistent and reliable than we have ever known before. Unfortunately, far too little of that knowledge base has been incorporated into the preservice programs of teacher education in the United States.

Sources that describe the curriculum of teacher preparation are worthy of mentioning here. They are: (1) *The Proteach Project*, University of Florida (1980-82) and (Dave Smith, 1982); (2) *Design for a School of Pedagogy*, Teacher Corps, Washington, D.C. and the *Florida Beginning Teacher Program*, Florida Teacher Education Certification and Inservice Development Department (B. O. Smith, 1981); and (3) *Excellence in Our Schools, Teacher Education: An Action Plan* developed by the National Education Association, (Sharon Robinson, NEA, 1982); (4) *A Common Body of Practice for Teachers*, the University of Minnesota, National Support Systems Project (Maynard Reynolds, 1980); (5) *Extended Program Curriculum Reform* at the University of Kansas (Dale Scannell, 1981); (6) the *Case for Extended Programs*, University of Kentucky (George Denemark, 1980); and (7) *Profiles of Excellence* (AACTE, 1982).

In my analysis, the most comprehensive description of the knowledge base for teacher education has been conducted by the teacher education projects in Florida. The reconceptualized teacher education program contains seven basic components: (1) extensive general education; (2) a comprehensive subject matter knowledge base; (3) a pre-education component including sociology, anthropology, psychology and other undergirding disciplines; (4) a foundational education area including educational psychology, tests and measurements, history or philosophy of education, and other related areas; (5) a generic pedagogical component appropriate to teachers regardless of level or subject matter; (6) a subject-specific pedagogical component appropriate to the age level of students being taught or the subject matter for which the teacher is responsible; and (7) a clinical and laboratory component dealing with the knowledge and experiences of a laboratory nature prior to clinical practice and during student teaching and internships.

The generic pedagogical component appropriate to teachers regardless of level or subject matter is especially interesting. It is divided into the roles and functions of teacher as teacher, teacher as person, and teacher as professional. Then each of these is subdivided into other content areas. For instance, the role of *teacher as teacher* has five categories: (1) diagnosis; (2) instructional planning; (3) instructional management; (4) observation; and (5) interpersonal relations. Each of these areas has appropriate knowledge and behaviors specified and each is validated by a research base. Almost all of the research base for the Florida model comes from research done in classrooms. Also, feedback and review was sought from classroom teachers as well as university based researchers.

Many agencies contributed to these research efforts. The research on teacher

education was linked with the research on more effective schools; mastery learning, time on task, direct instruction, etc. In the Florida model, for example, special use was made of research on teachers' pedagogical judgment, plans, and decisions as developed by Shavelson, and the Rand Corporation with the support of the National Institute for Education. The work of Brophy (1978) on Classroom Organization and Management which was supported by the Institute for Research on Teaching in the College of Education at Michigan State University and funded by the National Institute for Education was also cited as especially worthwhile.

The NEA *Excellence in Schools; Teacher Education: An Action Plan*, (Robinson, 1982) which started as a joint effort with the AACTE *Profiles of Excellence Task Force*, focuses on major functions of teaching in the classroom: (1) facilitating learning; (2) managing the classroom; and (3) making decisions. These functions are recommended as the basis for the design, development and implementation of college programs. A sample of teacher actions is provided under each of the aforementioned major functions. An extensive list of the learnings, skills and field based experiences are cited in the *Action Plan* and are meant to provide teacher preparation institutions with the foundation for reorganizing programs.

The American Association of Colleges for Teacher Education, in a companion effort to the one that produced the NEA *Action Plan*, has described what beginning teachers should know and be able to do. AACTE's *Profiles of Excellence Task Force* through a series of interactions with NEA and other professional groups is trying to spell out the essential knowledge base for beginning teachers. There appears to be agreement that all professional programs should include: (a) *the comprehensive study of pedagogy*, including field experiences in teaching and learning settings, foundational studies, generic teaching domains and specialized pedagogical knowledge; (b) a solid *foundation in general education or liberal studies including basic skills;* (c) advanced *study in one or more teaching fields;* and (d) an *interdisciplinary view of the disciplines undergirding education*. These latter preprofessional studies include such areas as psychology, sociology, anthropology, philosophy, political science and economics with an emphasis on prescriptions for the work of the teacher in the classroom and not merely memorization (Denemark, 1981).

Also, it is the consensus of all the aforementioned organizations and individuals working on the content of teacher education that the complexities of teaching require rigorous preservice preparation. Teachers need to be well educated in liberal and general studies, since *all* school teachers are teachers of general education. Furthermore, it is assumed that an essential preparation component for both elementary and secondary school teaching is indepth study of academic disciplines that relate to those portions of the school curriculum for which a teacher has instructional responsibility.

Another fundamental assertion is that all teacher preparation programs should have clear and explicit program objectives derived from the profession's conception of the teacher's role. There should be a direct and obvious relationship between these objectives and the teacher education curriculum.

Anyone who does not possess the required knowledge and skills included in the curriculum is "unsafe" to place with students as their teacher. For example, in the pedagogical area of study all beginning teachers must demonstrate: (1) a *knowledge of learners* — their individual differences and special learning needs and style of

learning; (b) *knowledge of teaching* methods including differentiated instruction and classroom management; (3) *knowledge of resources* appropriate for specific learning levels and the use of a wide variety of teaching tools including computer aided instruction; (3) *knowledge of evaluation*, including the validation and interpretation of tests; (e) *knowledge of the education setting*, the nature of the school as an institution and the ability to work with parents; and (f) *knowledge of the profession of teaching* and the ethics that guide it.

All of these program components are essential to the preparation of a teacher. Each contributes to the shared, systematic and scientific knowledge-base for pedagogical decisions (Corrigan, 1982).

Also, all teacher education programs must incorporate experiential as well as theoretical components. The proposed Action Plan of the NEA as well as all of the other aforementioned programs emphasize the importance of field based experiences beginning with the first education course and continuing throughout the entire program.

Even with the aforementioned consensus regarding its importance, it is my view that field experience continues to be the most neglected aspect of teacher education. Teacher preparation programs today too often have been lecture oriented, partly because of time and resource limitations which constrain the programs; the format and teaching strategies have been similar to other areas of university study (Haberman, 1982). The fundamental problem is that this approach grossly underestimates the complexity of preparing a person for effective teaching.

Education graduates do not feel that they are particularly competent as a result of their having been through the programs. And, in fact, they are not. Teacher education programs have insufficient impact on prospective teachers because what is taught has little transfer to classroom practice, and there is much that cannot be taught or cannot be taught well because of the place in which teacher education is conducted. One does not adequately learn to teach by just learning *about* it. It is also necessary to develop a strong "theory in use" foundation in the study of the profession itself which gets at the role of the teacher as a professional advocate for the educational rights and needs of children. One semester of student teaching near the end of the teacher education program is not adequate.

Quality teacher education must include programs and facilities for extensive *laboratory* and *field-based* experiences as well as for the more traditional approaches. Most that prepare teachers have neither program time, resources, nor facilities for making such experiences adequately available. Such inadequacies have produced a "hardening of the categories." There is no reason why we cannot organize education programs vertically rather than horizontally, so that students can study professional education, a specific discipline or disciplines, and have direct experiences simultaneously. Each of these dimensions adds meaning to the other as they are integrated into the professional growth of the prospective teacher.

Engagement with the real world of teaching should begin as soon as a person thinks he or she wants to teach. Useful work divided up into achievable goals for the most inexperienced, and gradually increasing the required performance, is the ideal form of preparation. All dimensions of teacher education — liberal arts, specialization in a discipline or broad fields, professional studies, and personal study of self can be

integrated if they are offered throughout the lifetime career of teachers while they are both practicing and studying new approaches to teaching (Corrigan, 1974). Moreover, knowledge about the educative process such as the nature of children and youth, the nature of subject matter, the nature of the educational setting — school and society, the nature of the process of learning, the nature of teaching, the nature of instructional materials and media, the nature of one's self, the nature of the profession, and the nature of evaluation cannot be taught meaningfully in isolation of the complex problems to which they are to be applied (Corrigan, 1974).

Because I believe in the integration of theory and practice, I recommend that the teaching profession reject fifth year programs in contrast to five year program models that propose four years of liberal arts with a fifth year of professional work tacked on to the end. Such programs do not provide for integration. The concept of "theory in use" is as important for the liberal arts courses, especially the undergirding disciplines, as it is for professional education courses.

ISSUE #2, QUALITY CONTROL

Unless the loopholes which bypass professional program evaluation are plugged, efforts at quality control by teacher education institutions and the teaching profession will continue to be undermined. State and local boards of education, school superintendents and state legislatures must begin to be held accountable for holding to "entry to profession" criteria along with teachers and teacher educators.

In the United States, using the shortage of teachers as a rationale, groups such as State and National Task Forces on Higher Education, (Scanlon, et.al., 1982) Regional Educational boards (SREB, 1981) and even State Legislatures, such as the Legislature of the State of Virginia (Ingall, 1982) are proposing that graduates with baccalaureate degrees in science and mathematics be sent into classrooms to learn "on the job," without adequate professional preparation. Such recommendations are not only inconsistent with a professed commitment to quality control, they demean the profession of teaching and show a lack of understanding of the kind of knowledge and skills needed by elementary and secondary school teachers. To propose that people who lack essential "entry level" professional requirements be placed in classrooms is to invite the kind of failure that will further erode the public's confidence in the teaching profession. Furthermore, if the future is anything like the past, we can be sure that colleges of education which will have no part in educating or hiring these unqualified "teacher substitutes" will be blamed by the critics for lack of quality teachers in the schools.

I'm sure the medical profession would never accept such a recommendation. Initial qualifications, referred to as "safety to client" criteria in some other professions, must be insured by completion of an approved program of study which includes essential knowledge and skills, and demonstrated competence under supervision. Certainly, there should be an induction period under the guidance of a supervisor in the local school setting but that period of induction should be preceded by a period of student teaching as an integral part of all national and state approved pre-service teacher education programs. The intellectual future of children is at stake here as well as the status of the profession.

As a result of P.L. 94-142, the *Education for All Handicapped Children Act*, there are many mildly handicapped children in regular classrooms who require the skills of teachers who possess knowledge about the special learning needs of handicapped children (Grosenick and Reynolds, Reynolds, 1978). In addition to knowledge about the various handicapping conditions, teachers need to know about the wide variety of learning materials for use in developing Individual Educational Plans that are now required by law. Science and mathematics teachers must have this knowledge and skill as well as teachers of other disciplines. All teachers today have both educational and *legal* obligations to the children they serve.

The teaching profession itself and members of its training arm, faculty of colleges of education, must take the lead in establishing quality controls in teacher education as well as at various levels of the profession of teaching. We must require that teacher education institutions meet, and improve upon, existing standards at four points in the training of teachers: (1) admission to the college or university, (2) matriculation into a teacher education program, (3) prior to the student teaching, and (4) after a period of demonstrated competence in the classroom. Licensing should be awarded only after this period of demonstrated competence during a year's internship under the supervision of a mentor or a local review board of professional peers or a cooperating teacher center. This internship should be an integral part of all pre-service teacher education programs.

Examinations should be included as one aspect of teacher education programs. All tests should be administered by the college responsible for the program and the test items should be related to the goals and objectives of the program. Tests should be considered as one important component in a comprehensive assessment system; they should not be "laid on" as a single definition of teacher competency by any state or national agency or legislature (Corrigan, 1982). In the United States today there is great danger that the public will become prisoners of the idea that testing teachers has solved all the problems of quality in teacher education (Elam, 1981). At least 34 states have initiated efforts to use such measures (Sandefur, 1981) and 10 of these are advocating admission tests. The recent Gallup Poll indicates that a significant majority of American parents believe that licensure examinations should be instituted.

To develop the public trust that the profession can be accountable and responsible for its own testing and other forms of quality control, new teeth must be put into national accreditation and state program approval standards. Agencies that accredit and certify teachers must insure the validity and appropriateness of the instruments and evaluation procedures used. They must also insure that a tight coupling exists between the goals, curriculum and evaluation aspects of all teacher preparation programs that they approve.

Furthermore, the profession itself must provide incentives by building criteria for excellence into its evaluation policies and procedures as well as maintaining minimum standards. The problem with minimum standards is that they are not high standards. Too often minimums become maximums. When this happens the good becomes the enemy of the better. I do not mean to minimize the importance of spending professional time and energy in the development of national professional standards or program licensing board approval procedures. We must have these minimum standards as a foundation on which to build. As a profession, whenever we propose minimum

standards we must simultaneously commit ourselves to devoting an equal amount of incentive, time, and energy to the development of creative ways to exceed the minimums.

CONCLUSION

The most important challenge facing colleges of education, the teaching profession, educational task forces, and legislative subcommittees studying teaching and teacher education today is to make sure that the shortage of teachers is not used as a rationale for going slow on standards, new quality control procedures and needed improvements in schools and colleges of education. There is no evidence to show that lowering standards in hiring teachers or lowering the requirements for admission into teacher education programs increases the supply of teachers or increases enrollments in teacher education. In fact, there is probably more evidence to show that lowering standards drives the best students and the best teachers away from teaching as a career.

The problems of teacher education are not insoluble, but they are not problems that simple solutions or minor tinkering will correct. More fundamental changes in the education system are needed. These changes must occur in school settings as well as in the universities. Central to a new design of teacher education for the 1980's and beyond is recognition of the fact that preservice education, inservice education and the schools and colleges themselves, are interrelated and interacting components of *one* education system. We must replace our present disconnected approach with a new partnership that provides an interlocking process of educational *improvement* and *teacher education* at all levels of the educational spectrum. Resources, both financial and personal, must be directed toward strategies that link schools seeking to change with teacher-education institutions seeking to break out of obsolete patterns of preparation.

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THE CONTENT IN TEACHER EDUCATION PROGRAMS

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There are those who might suggest that, by clear and direct inference, this paper constitutes an indictment of teacher preparation programs as we know them today. That inference is based upon the supposition that if current teacher preparation programs are inadequate in their content, they must be fatally flawed in some fundamental fashion. Not so. Educators need not offer an apology for currently existing teacher preparation programs. For the most part, present programs have served us acceptably. They have resulted in the preparation of a cadre of teachers that, in the main, have served our youth, our parents, our schools, and our nation well. Within the last half century, America's teachers have prepared individuals who have led our nation, contributed to major medical advances and launched satellites and shuttles.

Teacher preparation programs have done especially well in view of the restrictions placed upon them. Teacher education programs enjoy (suffer is perhaps a better word) grossly inadequate funding, inadequate staff and facilities that hardly rank among the most lavish found on our campuses. The inadequate funding available for teacher education programs has been compellingly documented (Passeau & Orr, 1980). It has been established that frequently the cost of programs to prepare teachers is lower than the cost of programs for teachers to teach students. All too often, the formulas for funding programs in higher education support teacher preparation programs at a more frugal level than virtually any other programs on our college campuses. But, perhaps, the greatest restriction of all has been that of inadequate, and, in some cases, even diminishing time to prepare professional educators in an increasingly demanding field (Smith & Street, 1980). A reduction in the time available for professional preparation during a parallel period of rising expectation for professional performance seems especially inconsistent and, perhaps, even irrational. It touches the heart of the problem faced by teacher educators today.

It is abundantly clear that there is great societal concern over the perceived inadequacy of teachers and teacher preparation. Evidence of that concern may be found in a variety of sources. You may remember with vivid clarity the recent cover of *Time* proclaiming to all who had been taught to read that teachers can't teach. The shocking examples cited in the *Time* article dealt with virtual teacher illiteracy. It dealt, though less harshly, with the inability of teachers to teach (few ever posed the question as to how teachers could pass presumable rigorous courses offered by our colleagues in colleges of liberal arts and sciences). Network news specials painted a bleak picture of the ability of teachers to function effectively in classrooms. *Newsweek* followed with a pessimistic portrayal of the teachers of our nation.

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Educators, who are required to deal with legislators, both at state and national levels, recognize all too well that we do not fall in the category of the favored few. For example, a recent report published by the Southern Regional Education Board calls for major action to presumably improve the quality of the teaching corps in the schools of our portion of the United States. This report appears to have precipitated increasing disenchantment with teacher preparation programs and deliberations in a variety of our state legislatures in our region confirms a substantial crisis of confidence in the preparation of the teachers who staff our schools. In some cases, recommendations within the report are clear and explicit. Yet some appear simplistic and recall solutions which were ineffective with regard to similar problems faced in the 60's and offer little likelihood of success today.

Any argument or assertion that teacher preparation programs, as we have known them for over half a century, are perfect beyond conception, is neither credible nor acceptable. I, for one, am ready to acknowledge that there is much to be done to improve the preparation of the teachers who shape the minds and alter the hearts of our most valued and valuable resource. We need the support of individuals who are in a position to help us acquire the resources necessary to accomplish our task at an increasingly demanding level. In addition, our critics need our help. All too often, those who are critical of teacher education have astonishingly little fundamental understanding of the essential components of teacher preparation programs, their design, and intended function. For example, many critics who feel that we need more subject matter in teacher preparation programs don't understand that it is typical for secondary education preparation programs to require between 75% and 83% of the coursework outside of the College of Education. In some cases between two-thirds and three-fourths of a four-year program for the preparation of elementary school teachers is taken outside the College of Education. Unknowledgeable critics frequently have inaccurate and distorted views of what constitutes teacher preparation programs. We can assist them, and perhaps ourselves, by trying to provide them with accurate information about the nature and scope of teacher preparation programs as we know them today. In seeking program improvement, it might also be helpful to have some knowledge of the nature of teacher preparation programs as they existed 50 years ago. For example, those professions that have made major gains in both social esteem and salary during the past half century, have almost inevitably been those professions that have substantially increased the qualifications required to practice their craft.

Teacher educators that seek to escape the traditional boundaries or parameters placed upon training programs need to consider the following questions:

1. What should beginning teachers know in order to function effectively for the majority of their career in the 21st century?
2. What should beginning teachers be able to do to function at a fully professional level at the time of entry in to the profession?
3. What is the state of the art of the knowledge associated with teaching and learning?

If teacher preparation programs are designed with these essential questions in mind, we may define the content of teacher preparation programs in a substantially different fashion than we may have in the past. To illustrate this process, I will briefly describe our PROTEACH activities at the University of Florida.

PROTEACH

A strong case can be made that the social science research literature associated with teaching and learning is better, more consistent and reliable than we have ever known before. Unfortunately, far too little of that knowledge base appears to be in the process of being incorporated into the preservice preparation programs of teachers. There is simply not adequate time available in existing programs to sufficiently absorb the content which needs to be incorporated into preparation programs. The literature to which I refer has been discussed and described by B. O. Smith, MacDonald, Denemark, and others. Fragments of that knowledge are known to most, if not all of us. But, it should be acknowledged that a comprehensive review of the full scope of contemporary social science research dealing with teaching and learning is difficult to acquire.

At the University of Florida, we have been working since March, 1980, on the question of teacher education content appropriate to reconceptualized program. We have been trying to develop a reconceptualized program based upon the best, most consistent and reliable knowledge available. In those cases where the research knowledge base is inadequate, or appears inadequate, we have relied upon the best available conventional wisdom.

Prior to committing ourselves to the design of a reconceptualized teacher preparation program, individual meetings were held with key state figures. In the vast majority of cases, those individuals supported our effort in the need to extend the preparation of teachers. After it was established that we appeared to have a sufficient support base within the state to attempt this task, meetings were held with faculty. The meetings with faculty indicated that sufficient support existed within the college to embark upon our effort.

Shortly after the determination that we did want to try to engage in the development of a reconceptualized teacher preparation program, we held our PROTEACH I Conference. At this meeting, we brought together the faculty of our college, accompanied by approximately an equal number of practitioners from throughout the state — urban teachers and rural teachers, principals, superintendents, representatives of the Department of Education and others. The primary purpose of the meeting was to address two of the essential questions described earlier.

What should a beginning teacher know?

What should a beginning teacher be able to do?

The questions were addressed in an extraordinarily constructive fashion by faculty and practitioners alike and that effort was extremely useful as we set about our effort.

Following our PROTEACH I Conference, we held our PROTEACH II Conference. The purpose of this conference was essentially to draw together our faculty, supplemented by knowledgeable individuals with an understanding of major national activities in teacher preparation. These resource persons were very helpful in describing portions of research literature, discussing the national climate for change in teacher education and in helping us get a better grasp of the scene beyond the State of Florida. During that general interval, we formed a steering committee composed of representative faculty and members of the college administration to help us chart our course through a long and difficult labyrinth. The Steering Committee has members of the

faculty from our Department of Subject Specialization and Teacher Education (secondary education), from General Teacher Education (elementary education), our Department of Foundations of Education, the Director of Planning and Development for the College, a member of the faculty from Instructional Leadership and Support, the Assistant and Associate Deans of the College, and the Dean of the College of Education who is chair.

We also have a Planning Committee which meets less often and reviews the overall progress of our PROTEACH effort. The Planning Committee is composed of the members of the Steering Committee and, in addition, has representative faculty members from the College of Liberal Arts and Sciences, the College of Fine Arts, the College of Health, Physical Education and Recreation, the College of Agriculture, representatives of the practicing school community (both teachers and administrators) and representatives of the State Department of Education. That group has been helpful and, on occasion, constructively critical. The purpose of the committee is to review the activity of PROTEACH to date and to make suggestions for mid-course corrections as we proceed with our redesign effort. Finally, and probably most important, a set of faculty committees has developed a series of valuable materials and statements that we have used internally to try to describe the elements of the program as they appear to take shape. Those materials include:

1. A statement of the assumptions which appear to support and undergird a reconceptualized program;
2. A planning document designed to help us proceed in a thoughtful and orderly manner;
3. PROTEACH I conference report;
4. PROTEACH II conference report;
5. A brief paper on the nature of knowledge that deals with a description of the knowledge which appears appropriate to a redesign of our teacher preparation program;
6. Steering Committee minutes and other internal documents; and
7. Reports of various task forces and other committees which are probably the most comprehensive set of documents describing the knowledge that we believe needs to be incorporated into a reconceptualized teacher education program.

Along with these activities in which we have been engaged and materials that we have developed, it would be useful to describe the basic elements which we believe to be central to the development of a reconceptualized teacher preparation program. Insofar as possible, we attempted to use existing terms and commonly accepted descriptions and definitions of elements of teacher education programs. We felt that communication among ourselves and others would be hampered by trying to describe in unique or novel ways, elements of programs in terms that are inconsistent with current practice. I should also indicate that even though the labels may be consistent with current practice, the scope of the knowledge that we might include in those components may go beyond what is currently possible, given the restrictions which many teacher preparation programs encounter. At any rate, let me try to enumerate them and describe them very briefly.

Program Components

We believe that it is essential that our conceptualized teacher education program contain a rigorous and extensive *general education component*. The nature of our society and the expectations for a professional teacher demand that these individuals be broadly educated and able to serve as exemplars to the youth whom they teach. In like manner, we regard a comprehensive and demanding subject matter knowledge base as central to the preparation of teachers. Teachers should have a clear command of their subject matter well beyond any levels expected of their students, and the burgeoning rate with which man is acquiring new knowledge makes this expectation more important than it may have ever been before.

We expect a *pre-education component* within our reconceptualized program. In our view, a preeducation component deals with the set of knowledge which would provide a teacher with a better understanding of the societal milieu in which he/she is likely to function. In all likelihood, such a requirement will include such areas as urban sociology, rural sociology, cultural anthropology, social psychology and general psychology. We regard this component as essential for teachers, regardless of the level or the subject matter areas for which they may be responsible.

A *foundational education component* is also expected to be an important element within our program. The foundational educational component may include educational psychology, tests and measurements, brief general background on the history and philosophy of education and, perhaps, other related areas. In addition, we are working to describe the *generic pedagogical component* of our program, which deals with a set of knowledge appropriate to all teachers. I will discuss that element in a little bit more detail later. We have made special efforts to describe the knowledge base associated with the generic pedagogical component. The elements of that component were developed with care after an analysis of practitioners and faculty perceptions regarding what a beginning teacher should know and be able to do. They also encompassed a review of a number of major studies of national scope of teacher preparation.

We also envision the requirement of *a subject-specific pedagogical component*. That component deals with the specific pedagogical content appropriate to the age level of students or the subject matter for which the teacher is responsible. Special methods would be included in this category, as might specific content associated with the particular developmental level of the learner.

In addition, a committee has been assigned the task of designing a *clinical and laboratory component* in our reconceptualized teacher preparation program. This clinical and laboratory component deals with the knowledge and the experiences which we expect to provide students of a laboratory nature prior to the time they begin their clinical practice and to describe the length and nature of the internship for student teaching.

These then, constitute the seven basic areas of our reconceptualized teacher preparation program. You will recognize that they are not a dramatic departure in large measure from the content of programs with which you may be familiar. To get a sense of what we are trying to accomplish, I will briefly describe a portion of the content associated with the generic component of reconceptualized teacher preparation program.

We proposed that there are three teacher roles reflected in the generic pedagogical component: teacher as teacher; teacher as a person; and teacher as a professional. In the first role, teacher as teacher, five behavioral categories were specified: diagnosis, instructional planning, instructional management, observation, and interpersonal relations. In view of time restrictions, I will only attend to task force reports on diagnosis, instructional planning and instructional management.

Diagnosis

The Task Force on Diagnosis reported that the most efficient, valid and reliable methods for assessing student behavior are grounded in a rich body of empirical research and demonstration studies. On the other hand, the uses of diagnostic information by classroom teachers has been, and will continue to be, determined by conventional wisdom or by current pedagogical theory, instructional philosophy, societal expectations and even legislative requirements (i.e., PL 94-142). It seems crucial to prepare today's teacher in both technical aspects of diagnosis and the utilitarian aspects. To restrict instruction in diagnosis to only the first category would leave the beginning teacher ill-prepared to deal with the realities of classroom life and the decisions that he/she must make on a daily basis . . . We think that it would be vital to teacher preservice teachers to make the distinction between these different types of concepts in a diagnosis. We point out that there is no such thing as 'enduring truth' in a dynamic area like educational diagnosis. Even empirical evidence may shift over time as student populations and assessment practices change. It would be folly for a curriculum committee to try to spell out in detail what diagnostic concept should be included (or excluded) from professional curriculum."

What do perspective teachers need to know about diagnosis? We have concluded that there are five major areas in which teachers should have professional diagnostic training. These include:

1. The role of diagnosis in educational evaluation and decision making.
   a. What types of evaluation must teachers make?
   b. What is the role of diagnosis in educational evaluations?
   c. What models of diagnosis and evaluation are useful for education?
   d. How can these models be applied in teaching settings?
   e. How should teachers set standards for student performance?
2. Diagnosis of individual learner needs.
   a. What types of information does the teacher need to make decisions?
   b. What methods are useful for diagnosis (including classroom and standardized tests as well as more informal procedures)?
   c. What skills and concepts do teachers need to judge the quality of diagnostic procedures and the accuracy of the information they yield?
   d. What skills do teachers need to interpret results of diagnostic procedures?
3. Diagnosis for group instructional needs.
   a. What types of information are needed to determine that the group is meeting instructional goals?
   b. What methods should be used to gather such information?
   c. What skills do teachers need to interpret results of these diagnostic

procedures?

d. What skills do teachers need to assess the quality of this information?

4. Diagnosis in special subject areas.
   a. What are the diagnostic needs which every teacher requires?
   b. What does every teacher need to know about selecting, evaluating, and administrating standardized diagnostic tests?
   c. What does every teacher need to know about interpretation of diagnostic test results for use in instructional planning?
5. Diagnosis for specific exceptionalities.
   a. What diagnostic skills and knowledge does every teacher need to identify children who were not referred for specialized diagnostic procedures?
   b. How should the typical classroom teacher interpret and use the results of diagnostic tests in instructional planning for the exceptional child in the normal classroom?

The task force emphasized that these illustrative concepts, behaviors, and references constitute only the tip of the iceberg for the knowledge areas that they represent and they hope that future planning committees who use these materials will keep that in mind at all times. In dealing with the elements of diagnosis just described, the committee selected knowledge areas, concepts, behavioral indicators, and illustrative sources for each in order to assist subsequent committees in the development of components for our instructional program.

Instructional Planning

A second task force dealt with instructional planning. The Task Force on Instructional Planning defined the process as that used by teachers in deciding what and how to teach. The task force accepted a widely recognized "planning model" which prescribed four elements in the sequence of planning:

1. precise specification of objectives
2. assessment of the entry behavior of students
3. the design and implementation of an instructional sequence
4. evaluation.

They noted that the simplicity and logic of such a rational model appealed to many theorists.

In their review of research on teacher planning, they gave major emphasis to two aspects which were regarded as important to beginning teachers — the content of "teacher plans" and the process of teacher planning. Research pertaining to each of these areas was reviewed within their task force report. The task force concluded that, "When teachers plan, they plan about: objectives, the content to be taught, learning activities, time for instruction, and the methods of evaluating the lesson or the instructional plan." This report discussed research in each of those areas. While time does not permit the discussion of the summary of the research in detail, suffice it to indicate that the task force report does deal with those data in some detail.

I would also like to call your attention to a description of instruction format developed by the Florida Beginning Teacher Program Coalition for the Development

of a Performance Evaluation System. This effort has been coordinated through the Office of Teacher Education Certification and Inservice Development of the Department of Education in Tallahassee, Florida. I would be remiss if I did not acknowledge the particular efforts of Dr. B. O. Smith in supporting the work of the coalition. In their consideration of instruction format, specific attention was given to the total group/lecture, the total group/lecture-discussion, the total group/recitation, the total group/interaction, the total group/independent work, sub-group/disparate work and lesson type.

The coalition also considered in detail the management of subject matter. The management of subject matter included the management of conceptual knowledge, explanatory knowledge, content levels, discourse, and emphasis. I should call your attention to a review of research of teachers' pedagogical judgment plans and decisions developed by Shavelson, the Rand Corporation and UCLA with the support of the National Institute for Education. This review focused upon the teachers' judgment, teachers' planning, and teachers' interactive decision-making and contains an extensive set of annotated references. All of these sources of information, and others, are being utilized in the development of our generic knowledge base component for teacher preparation.

Instructional Management

A third task force dealt with instructional management. The report of the Task Force on Instructional Management interpreted the area of their review to include "all of those activities of the teacher that occurred during the conduct of the instruction in the classroom, within the domain of what might be called strategies, method and methods or techniques of instruction." The task force report was divided into the areas of "direct instruction, physical environment in the use of space, individualized instruction, instructional resources in the classroom and community, small group instruction, team teaching, and classroom management." For example, in the area of direct instruction, four specific sub-areas were considered:

1. direct instruction
2. engaged time, task on task
3. teachers questioning behavior
4. teacher efficacy

"In the last five to ten years, the profession of education has witnessed the emergence of an increasingly firm consensus among researchers and practitioners about their relationships between teacher behaviors and the academic achievements of students in their classes." Specific new insights have developed in relation to such factors as the importance of "time on task" as a specific factor in improving student achievement. The importance of structure classroom management behaviors and presence of low negative teacher affect is clear. "Patterns of instruction associated with what has come to be called 'direct instruction' seemed correlated with successful efforts to improve student achievement in standardized tests of basic skills." This section of the Task Force Report on Instructional Management sampled some of the more important areas of that consensus. In the presentation of the task force report, the concepts important to beginning teachers were identified, defined, indicators presented, and sources of information provided. This format was consistently followed

throughout the Task Force Report on Instructional Management. It provides a data-based set of concepts useful and appropriate for beginning teachers.

A description of the management of class time done by the Florida Beginning Teacher Program Coalition for the Development of a Performance Evaluation System through the Office of Teacher Education Certification and Inservice Staff Development in the Department of Education was also developed. This effort, too, was assisted by the insight and expertise of B. O. Smith, and provides a highly structured and organized description of the set of skills which are essential for beginning teachers if they are to manage class time effectively. I would also call your attention to a paper developed by Jere Brophy on Classroom Organization and Management which was supported by the Institute for Research on Teaching in the College of Education at Michigan State University and funded by the National Institute for Education for a conference held at Arlie House in Warrington, Virginia earlier this year. Here again, all of these data are being considered and incorporated into a generic component for the preparation of beginning teachers.

CONCLUSION

In like manner, I could continue with reports of the Task Forces on Observation, Interpersonal Relations, Teacher as a Person, and Teacher as a Professional. Rather, I shall cite sources in the references for the information to which I refer in this paper, including the entire set of task force reports, plus recently developed information which parallels, but does not duplicate the effort of our faculty. All of this is to suggest, rather than to document in detail, that a better, more substantive, consistent and reliable data base exists for the preparation of truly professional teachers than we have ever known before. Educators have been so stretched in recent years that we have simply not had a legitimate opportunity to incorporate much of this body of knowledge into our preservice preparation programs. Furthermore, even if we had the inclination and made the effort, there is simply not sufficient available time in preservice preparation programs to permit us to deal with the acquisition of this knowledge in a substantive fashion; thus, the need to press strenuously for extended teacher preparation programs.

I should also acknowledge that I am painfully aware that I have not attempted to deal in detail with other important areas of a teacher preparation program including the clinical component, the subject specific component, a preeducation component, the nature of a general education component appropriate to the preparation of teachers, and the subject matter component for teachers in a variety of teaching fields. All of this represents necessary and difficult work, but clearly exceeds the scope of this paper.

At this point, let me simply acknowledge that the stakes for the extension of the preparation of beginning teachers are terribly high and that teachers will never realize genuine professional status until the preparation program represents a genuinely respectable body of professional knowledge. It's very hard work. But, in all candor, I believe that the greater risk is in not pursuing our goal. Business as usual is simply not an acceptable alternative.

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THE LAW: A STEP FORWARD IN OKLAHOMA

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I appreciate the opportunity to participate in a discussion of the future of teacher education. Given the status of teacher education and serious concerns regarding its quality, no topic is of more importance to teacher educators. Our future will be far more positive than our past or we will see a reduction in our number. Unless major reforms occur, we will sink further into a professionally debilitating malaise that weakens our fundamental roots — the tradition of public education. These are somber words but the matters before us must not be taken lightly.

My comments are in five parts: 1) an overview of the process by which Bill 1706 was developed in Oklahoma; 2) the major components of the legislation; 3) the current status of the bill; 4) legislative mandates and the future of teacher education; and 5) a note on what that future must include.

THE HISTORY OF BILL 1706

In 1977, the Oklahoma State Department of Education appointed a task force to address the certification code. The task force included teachers, administrators, deans of education and others. In my judgment, the goal of this effort was essentially to update the certification code, i.e., to make some cosmetic changes. The discussions became substantive, however, and focused on what could be done to improve the quality of teacher education. The report of the task force went to the Professional Standards Board and State Board of Education. Ensuing events suggested little enthusiasm for implementing the proposals. However, the effort coalesced the deans and directors of the 20 teacher education programs in Oklahoma. The deans met regularly to debate the preparation process, i.e., admissions standards, the general education component, clinical experiences, and so on. To this day, that coalition has maintained its commitment to the ideas forged in the late '70s which eventually became part of Bill 1706.

During the 1979-80 Legislative session, Representative Jim Fried became chair of the House Education Committee. Working with Speaker Dan Draper, Senator Roger Randell, Representative Cleta Deatheridge and other legislators, Representative Fried built on the deliberations of the task force and organized a series of hearings on teacher education and the quality of public education. In a process both rare and positive, Representative Fried and his colleagues criss-crossed the state and invited all segments of the education establishment and the public to express views on the quality of teacher preparation and the impact of that process on public education. Teacher educators were given a number of opportunities to contribute ideas to this process. Ideas gleaned from the hearings became Bill 1706. The law was passed in 1980 and became fully effective on February 1, 1982. It is the most comprehensive education legislation in the state's history.

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Coalescing support for the bill was not easy. The bill is comprehensive and virtually every segment of the profession had ideas, modifications or objections to its components. The legislative leadership somehow made sense of all the disparate views expressed, seeking consensus on points that became the heart of the legislation. The Oklahoma Education Association, for example, initially was not supportive of the legislation since teacher pay increases are a part of the bill. The OEA argued that teacher salaries should be separate from legislation dealing with the preparation of teachers. The legislators agreed that increased salaries were vital but that the public had to be guaranteed that changes in how teachers were prepared would also take place. After much discussion, the legislative view prevailed and passage of 1706 followed quickly.

This example only suggests the heat of the political process. Enough has been said, however, to indicate that the legislative leadership deserves much of the credit for passage of the law. Rarely in the legislative process have a group of legislators more consistently expressed their determination to enact such legislation, nor could they have more skillfully navigated the wide range of opinions regarding teacher education.

COMPONENTS OF BILL 1706

Bill 1706 is lengthy and begins with a proposal for pay increases for teachers. My focus will be only those components directed at teacher education. The bill requires that schools of education increase their admissions standards. It does not specify those standards, leaving to the profession the determination of admissions criteria. It outlines the need to address more than grade point averages in the selection of teacher education candidates.

The law requires additional clinical and field experience in the preparation process. Again, it does not specify how many hours are to be required, leaving that decision to professional judgment. It does make clear the need to emphasize this aspect of the preparation program. Fortunately, teacher education in Oklahoma and nationally has made good progress on increasing clinical field experiences, at least as much as is possible within the four-year preparation framework.

The bill specifies that persons preparing to teach must pass a series of subject-matter examinations in the areas in which they are to be certified. It should be emphasized that the test requirements are placed on persons before graduation. Many in teacher education would agree this requirement is more appropriate than the punitive approach followed in some states that has required tests of persons already teaching. In any case, any examination is controversial and all the expected arguments, pro and con, were heard. The State Department of Education (SDE) was given full responsibility for developing these tests. A series of committees were established and an appropriate planning process put in place. With the help of a national testing firm, the SDE has now offered the examination twice — in January and April of 1982. The January results were fragmentary, as would be expected. Nonetheless, newspaper coverage compared one institution to another, even though in some institutions only two or three students took tests. Their average scores were reported as somehow reflecting on the institution. Overall, there is no evidence that teacher education was damaged by these returns. The majority of students passed the tests and some

institutions appeared stronger than others, but, again, this is not a legitimate judgment. There is no doubt that as the tests are repeated year after year, the results will provide insights into the quality of preparation at the several institutions in Oklahoma.

The examinations focus on the subject matter preparation of prospective teachers and do not deal with pedagogy. In some areas, overlap with pedagogy is inevitable, as in the area of special education since virtually all of that specialty is offered in schools of education. The majority of the examinations are in the traditional arts and science subject areas. The law includes appropriate provisions for taking the tests more than once. The net impact of the tests will no doubt remove some persons from the teacher preparation process and that is a desirable goal.

Teacher preparation has never been taken very seriously. Many persons have breezed through it because it is a routine process, other than the possible trauma of student teaching. The examinations communicate the message that the subject preparation of teachers is important and that becoming a teacher is a more serious decision than it has been in the past.

Another component of the bill deals with entry-year assistance committees and makes a fundamental change in certification practices. Effective this year, all new teachers in Oklahoma will receive a license to teach upon completion of their college program. The license permits persons to find a teaching position and is good for one year. New teachers, called entry-year teachers, will have full responsibility for classrooms and will receive a full salary. During the first year, they will be mentored and monitored by a three person committee consisting of a consulting teacher, the principal of the school, and a professor of teacher education. This three-person committee is obligated by law to observe the new teacher a prescribed number of times and to confer with the teacher.

The function of the committee is to challenge the "sink-or-swim" phenomenon so prevalent in the induction process. The committees are to help the teacher and to assess the teacher's progress. At the end of the year, the law requires that the entry-year-assistance committee must make a decision as to whether the teacher is to be certified. The recommendation of this committee replaces the recommendation of the teacher training institution.

This is a fundamental change in the certification process, not only in Oklahoma but in the United States. If we view the three-person committees as being representative of the profession, i.e., teachers, administrators and teacher trainers, the law in effect moves control of entry to the profession. In the view of many in the teaching profession, and in my view, this is a highly desirable change. While it will take several years for the entry-year process to become institutionalized, its potential for strengthening the induction process is incredibly strong. For the first time in the history of teacher education, every new teacher will receive help and guidance during the entry period. This is a goal many teacher educators have sought for generations. I am delighted that Oklahoma is the first state to implement this highly desirable goal.

The law provides for continuing education requirements for teachers throughout their career. Staff development committees are specified for each school system, and each committee must have a majority of its membership composed of teachers. School boards are required to provide salary inducements as teachers continue inservice activities throughout their careers. These activities are not limited to college credit.

The emphasis is perhaps more on inservice activities created at the school system level. The opportunities for college and school system cooperation are great, and there is evidence such cooperation is taking place.

As part of the continuing education provisions, professors and deans of education are placed under the same requirements. There is an expectation that each professor of education will provide evidence each five years of ways by which he/she has worked with the field. One specific suggestion, and one that forms the heart of the requirement, asks professors of education to spend a minimum of ten days in the classroom each five years. This requirement has been interpreted as not meaning that each professor must teach in an elementary or secondary school. Rather, each professor must work in a school or agency in a role appropriate to their work. Persons preparing administrators, for example, can spend time with a superintendent or principal. Counselor educators can trade positions with high school counselors, and so on. Opportunities for the development of positive linkage with the profession are very promising.

While several components of the law are directly aimed at teacher education, the tone of the law and its requirements are non-punitive. The law represents what many teacher educators have been seeking not only in Oklahoma but nationally. The law is facilitative, one that leaves to teacher educators, the Professional Standards Board and the State Department of Education the power to implement all phases of the law. Given that characteristic, I commend Bill 1706 to you as the most positive teacher education legislation that has thus far been enacted in the United States. I am not suggesting that all teacher educators in Oklahoma share this view, or that there could not be improvements on 1706. At this stage, I believe it is exceptionally positive.

It is important that we recognize the omnibus nature of the Bill. Debating any one of its components is obviously possible. It is more important to see how the components fit together. Any attempt to reform a profession calls for addressing all aspects of the preparation and induction process. If Bill 1706 has any weakness, it is that it is not comprehensive enough. For example, efforts to completely close the door on part-time or temporary teaching certificates failed. Arguments regarding such certificates are well known and need not be elaborated here. Temporary certificates have been the bain of the profession for generations, providing a back door that consistently weakens the profession. The bill also does not address the time needed to prepare teachers. The bill would have been incredibly powerful if it had called for a six-year period to prepare teachers. All the components of the bill have my full support, however, and I believe the support of the states educational leadership.

THE IMPLEMENTATION PROCESS

Major responsibility for implementing regulations appropriate to the law fell on the State Department of Education. A handful of individuals in the State Department have worked hard on developing appropriate guidelines and procedures. They formed needed committees and have brought to the Professional Standards Board and State Board of Education their many recommendations. I have already noted the development of the competency examinations in subject areas. This was a massive undertaking and one that will continue to take much time as the tests are refined.

Making arrangements for entry-year committees has not been easy. This is such a new development in the profession that many questions about the role of the consulting teacher, the relationship between the teacher and the principal, the work of the teacher educator on the committee, and related matters have been debated again and again. The entry-year committee concept will be in place for the first time this September, though it has been piloted in a number of school systems this past year.

The major decision made by legislative leadership over the past year has been not to amend Bill 1706 save in minor ways during the current legislative session. These minor changes do not alter the substance of the law. The legislative leadership's position has been that they will not modify the law until it has been given a full opportunity to be tested. Some school administrators argue that they will circumvent Bill 1706 by hiring only teachers with several years experience. They evidently do not wish to change procedures required under the entry-year committee component and have sought to undercut the entry-year committee requirements with the legislature. The legislative leadership has refused to make any change in the entry-year component, however, seeing it is an important reform.

A major part of the implementation process is a 4.7 million appropriation for teacher education. This appropriation will be precedent-making in Oklahoma, similar to the Ohio plan of several years ago. The need for support is clear. There are new administrative costs in implementing Bill 1706. There will be heavy travel costs as professors serve on entry-year committees. Most importantly, the requirements of the law are viewed as an overlay over current professional responsibilities. At the University of Oklahoma, for example, the normal teaching load is three courses per semester. A formula has been developed so that professors serving on entry-year committees will be released from one course per semester to do so. This is a vitally needed course reduction if professors are to seriously participate on committees and forge new links with the field. Funds must be allocated to the college so that new or adjunct faculty can be recruited to release the permanent faculty for entry-committee assignments.

Every person on an education faculty, including colleagues in Arts and Sciences and Fine Arts who teach methods courses or supervise student teachers, will participate on entry-year committees. This is activity not restricted to faculty who normally are involved in teacher education, i.e., professors in elementary, secondary or special education. For the entry-year committee concept to work as intended, professors of higher education, of educational psychology, of counseling and guidance, and in all other specialties in education will participate on entry-year committees. For the first time in the history of teacher education in the United States, total faculties within colleges of education will make an important contribution to the teacher induction process. I cannot over-emphasize the importance of this change for colleges of education. We have new opportunities for positive working relationships with the field that bode well for the future.

There are many logistic problems in mounting these committees. There will be difficulties on some committees, of course. As experience is gained, I am convinced that development of entry-year committees are the most positive change in teacher education with which I have been associated. It is something teacher education leadership has sought for generations. The opportunities to evaluate and conduct

research on these changes are great and the next several years will find Oklahoma teacher educators communicating with the profession on outcomes related to the law.

LEGISLATIVE MANDATES AND THE FUTURE OF TEACHER EDUCATION

Let me comment next on what I know is of concern to many in the audience. Many of us have resisted legislative mandates that affect teacher education. Our conventional wisdom states that legislatures should not force curricular changes on universities. Legislatures continue to do so, of course, and our conventional wisdom has some merit. I have also argued that such mandates are not appropriate. I may continue to so argue, but no longer with the same vehemence.

I have learned much from the 1706 experience. Legislators vary in how they approach problems, the same as any of us in this room. Some legislators take the high road, others impose changes in a punitive manner. In the case of 1706, the high road was taken. The Oklahoma Legislature, like legislatures in other states, is concerned with the quality of public education and of teacher education. If they were not so concerned they would not be performing their function. Teacher educators are not always respected in legislative halls and we know that in some states punitive legislation will result. We need to work with those legislators who take the high road. We must become part of that process. A legislative mandate to reform any profession is not necessarily bad — if the profession is involved in the process. Indeed, such mandates may be the only mechanism by which important changes will occur.

I have argued for years that the professoriate is a mechanism for change and reform. I have done so out of idealism, hope and conviction. This is the way I wish the world would be. A realistic assessment forces the view that the professoriate is not an appropriate mechanism for change. The idiosyncratic nature of being a professor, the reward system of universities, the town-gown gulf, and a range of other factors make it impossible for the professoriate to act as a body. Educators are as divided as those colleagues in Arts and Sciences and other departments at whom we frequently point the finger and say, "Why can't they get together?" This audience knows that at Texas A&M or at any institution represented in this room, many will spend their professional careers seeking ways to get departments to share responsibilities and to work cooperatively. This sometimes works, it frequently does not work; in either case, it is an ongoing struggle.

We only need to look at the maze of educational associations to underline this point. In respect to the accreditation of teacher education, TESCU is openly challenging NCATE's role. We have an ongoing tension between AACTE and ATE, groups that ought to be working in absolute concert but who continue to meet separately and waste incredible energy by maintaining a fiction of disparate interests. We have groups such as AERA where the majority of members view themselves as "above" teacher education. The research establishment all too often believes itself superior to persons in clinical work. One need not even begin to list the endless disciplinary associations to which most of us belong. How often have we gone to conventions where all we would have to change is a key phrase from "reading" to "special education", "teacher education", or "counselor education" for the rhetoric to fit our interests? The same

problems are debated at these associations, but always as if they existed only for that special interest group and no other.

Given our fragmentation, teacher educators have reached the stage where they much prefer to undercut one another than to work for the common good. I do not make this statement in any cynical or disparaging sense. The evidence is simply clear: educators are not committed to interdisciplinary cooperation any more than colleagues in Arts and Sciences. We act out the segmentation and compartmentalization endemic to our society.

If my diagnosis is correct, then legislative mandates are needed. Legislative mandates are going to take place whether teacher educators like them or not. If that is indeed the case, we should be part of the legislative process. We need to influence that process by providing ideas and arguing our case. Resisting legislative mandates is interpreted as a "cover-up" on our part. It is far more realistic to become involved through coalitions with the teaching profession, administrative groups, and legislative groups. We need to work on the mandates that will guide our efforts. This means a reversal of our conventional wisdom regarding the matter. A positive future for teacher education requires a rejection of conventional wisdom in many other arenas as well.

THE FUTURE OF TEACHER EDUCATION

Teacher education, obviously, has a future. Like any institution, it is not going to go away just because it is in trouble, attacked or underfunded. This has been our lot for generations and many of us will reach retirement under these conditions. Indeed, in any profession there will be a sizeable number who want to achieve retirement with as little change as possible.

For those who care about the profession and recognize that the quality of teacher preparation and the quality of public education are absolutely linked, the future can be positive. We must cease all excuses and rationalizations regarding teacher preparation. Instead, we must apply more rigor to the preparation of educational personnel. If we do not do so, we cannot expect any increase in rigor or higher expectations in the public schools. It is not an absolute one-to-one relationship, but it is very close to that ratio despite all the protective rationalizations we voice so easily.

George Denemark, Bob Howsam and others have taught us the phrase "life space" in teacher preparation. We must develop programs that go beyond the four-year norm. The four year pattern to which we now devote our energy is, at best, a paraprofessional process. One can suggest, therefore, that there should be two layers of teacher preparation. Current four year programs can continue to prepare persons for a paraprofessional role. Professional schools of education, on the other hand, will require an extended and intense period of preparation for teachers of the future — the instructional leaders who will guide teams of paraprofessionals in the school. I advocate a six-year preparation process with the sixth year being an internship similar to the Oklahoma entry-year teacher model. Whatever the time period, our future will either go beyond the four-year pattern or we will suffer a continued decline in our efforts. Things will not get better in the four year pattern, no matter how hard we try. All our efforts will be ameliorative rather than structural and the outcome will not be much different from our past.

We must relate the quality of our training to the effectiveness of instruction in the public schools. We must help create the conditions for professional practice this conference has enjoined us to consider. We can no longer place student teachers in anything but first-rate school and clinical settings. To do otherwise is unprofessional, yet we have done precisely that. We have placed our students where we can, rather than working only with school systems that provide the best possible learning-situations for children. It is only in such situations that teachers can truly exhibit professional practices of the highest order.

The future is also dependent on teacher associations gaining control over entry into the profession. Colleges of education have for generations controlled the entry process with the earning of a certificate being equivalent to getting a position. If the quality of what we have done had been higher, we would not now be faced with criticisms all around us. Because of low confidence in our past performance, teacher associations must have a strong voice in the accreditation of teacher education and control of the entry process. Until we recognize that we are all part of one profession, to echo Bob Howsam's words, there is no hope for teacher education being anything but the stepchild of the profession.

Our future also includes the creation of professional schools of education. While they may be campus-based, they must be autonomous institutions much like law or medical schools. Until we fully control admission to, the content of, and time required for training, our efforts will remain superficial. We cannot expect rigor in the public schools unless we achieve that same rigor in our own colleges.

There are, of course, other dimensions to our future. I am merely underscoring some structural changes that are voiced at conventions and meetings of this type. What we have not yet seen are entire states moving in these directions. We are at the point where we are still arguing with one another as to the desirability of these changes. As we debate them, we doom still another generation of teachers and children to the inadequacies of current practices.

We debate these matters as if we had all the time in the world. Our procrastination is an indication of the fact that many of us want to retire with as little change as possible in our professional behavior. There is no way to achieve a strong future without the types of structural changes noted above. There is no way these hopes can be implemented without fundamental changes in our behavior. Behavior changes must be made in the political arena, in the clinical experience arena, in the rigor of expectations for our students, in the scholarship we conduct, and in all other aspects of our profession. Enough has been said to at least suggest the magnitude of the work before us — at least some of us.

I appreciate this opportunity to outline Oklahoma's efforts to address these issues. Bill 1706 does not include the structural changes that must characterize the next generation of teacher education. It is a major step in that direction, however. We in Oklahoma can now face the future with hope.

RESEARCH NEEDED ON DIRECT EXPERIENCE

Martin Haberman*

Research related to student teaching can be characterized as meager, diverse and trivial. Its meagerness is a function of the fact that the knowledgeable people are those who do it and they are essentially practitioners, not reseachers. Its diversity is a function of the fact that there are few grants available in this area and that single-shot doctoral dissertations never cumulate into usable knowledge: they all simply conclude with a chapter advising others on ways to follow up. The trivial nature of this research is a function of the fact that those who do an occasional study are unfamiliar with the basic nature of student teaching and regard it as teaching behavior rather than learning behavior. They also make the mistake of viewing it as an individual behavior driven by knowledge and personality rather than an organizational behavior driven by the press of various settings.

In order to understand the development of student teaching it is necessary to have a general grasp of how teacher education has developed. Essentially, teacher preparation has evolved out of the lower levels of schooling into postsecondary and finally into university forms. As this transformation occurred there was an inevitable shift from the practicalities of apprenticeship to a broader form of training and ultimately, to a higher education rooted in theoretic-like concerns. My basic argument is that this development, while an improvement in quality, has shifted the locus of preparation from the school to the university and that there is a current set of pressures which seek to return teacher preparation to the schools. Related to this argument are issues which deal with the inevitably dysfunctional nature of lower schools and universities as "cooperating" organizations.

HISTORICAL DEVELOPMENT

During the colonial period the teacher training available was a form of apprenticeship. Its nature was usually of the "sit-by-Nellie" variety. For example, the following agreement was made in 1722:

> This indenture (apprenticeship) witnesseth that John Campbell . . . hath put himself . . . apprentice to George Brownell Schoolmaster to learn the Art, Trade or Mystery of teaching . . . And the said George Brownell doth hereby covenant to teach or instruct . . . the said apprentice in art, trade or calling of a schoolmaster by the best measure he or his wife may or can. (Cubberly, 1920, p. 386).

Gradually, a primary school education became the accepted requirement for future teachers and mere apprenticeship was replaced by some form of practice teaching in conjunction with the study of school subjects. In 1823 Reverend Samuel

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Hall's School was established in Concord, Vermont as the first private normal school in America. It was a three-year program. In addition to his *Lectures on Schoolkeeping* the third-year students in Hall's school were offered the opportunity of practicing on a few children who were admitted for the specific purpose of demonstration lessons. Hall's school, along with the second private normal school founded in Lancaster, Massachusetts in 1827 by James G. Carter, soon closed because of financial difficulties. Carter, however, was successful as a lawmaker and the 1837 law which created the State Board of Education and the first public normal school in Lexington, Massachusetts earned Carter the title, "Father of the Normal School." The school began with a faculty of one and a student body of three. Elsbee (1939) noted that the term "normal", which was borrowed from the French, derives from the Latin term *norma* meaning "a carpenter's square, a rule, a pattern, a model." (p. 145).

In 1839, Cyrus Pierce was appointed as the first principal of this first state normal school in Lexington, Massachusetts. He also conducted a model school for 30 boys and girls aged 6-10. Students in the normal school were the teachers in the model school. Mr. Pierce visited the school twice daily and thereby became the first supervisor of student teachers. In one of his letters to Henry Barnard, then Secretary to the Massachusetts Board of Education, Mr. Pierce outlined his pedagogical goals as:

> To Teach the pupils (i.e., the future teachers) by my own example, as well as by precepts, the best way of teaching the same things effectually to others. I have four methods of recitation. First, by question and answer, second, by conversation; third, by calling one, two, three, or more or less, to give an analysis of the whole subject contained in the lesson; and fourth, by requiring written analysis, in which the ideas of the author are stated in the language of the pupil." (Norton, 1926, p. 1).

It is interesting to note that unlike our modern admonition that teacher educators use the same *methods* with student teachers that they prescribe for students' use with children, Pierce was attempting to teach the very same *content goals* to his student teachers in the hope that they would then achieve these goals with their children. Also, unlike many of today's teacher educators, Mr. Pierce recognized and accepted individual differences among his student teachers.

> I see more the distinctive character of my pupils. I am glad to see them show plainly their individual and peculiar characteristics. A little observation would show the visitor that we have no block or mould by which we are all cast, so that there may be uniformity of character in the Prepared Teachers. I would have a way, a mode, a system; but still I would not have it so unyielding and restrictive as to preclude rather than aid individual developments. (Norton, 1926, p. 33).

Pierce was prophetic since his simple process of criticizing has lasted almost 150 years and will persist further. Unfortunately, his willingness to let his student teachers experiment and to have them observe his own teaching of children are no longer common supervisory practices.

Prior to the Civil War there were only 11 state-supported normal schools in this country (New York, Massachusetts, Connecticut (4), Rhode Island, new Jersey, Illinois, Michigan and Minnesota) and the number of graduates made no appreciable impact on the quality of public education. By 1898 there were 167 public normal schools and even more private ones. The public normal schools had graduated 8,188 teachers and the more numerous private ones another 3,067. This was still a modest influence on the schools since there were 403,333 practicing teachers at that time plus an annual need for 50,000 new ones. It is obvious that the vast majority of teachers were not receiving even the meager training of the state normal schools. "Meager"

since in 1900 the entrance requirements to normal school training was usually the modest prerequisite of an elementary school education.

With a few exceptions the normal schools prepared only elementary school teachers. By 1890, 114 colleges and universities (there were only 400 in total) were preempting the secondary field. The number of secondary education students numbered about 3,414 at this time.

In 1900, most of the normal schools preparing teachers were really offering high school level education with an infusion of pedagogy. For all its inadequacies, however, there was greater relevance in the teacher education of 1900 than there is now since almost all the subject matter content which teachers learned was the same or a slightly advanced version of what they were supposed to teach children. In terms of connections, linkage and relevance, we have deteriorated in the last 80 years.

In addition to the state normal schools and the private ones, there were cities involved in teacher training. By World War I (1914), every city in the United States with a population of 100,000 or more, had a normal school or a department in its high school for teacher training. (This amounted to almost 100 cities). The growth of those city training schools resulted from the demands of a growing population. State normal schools simply could not provide enough graduates. By the 1930's only about 20 of these city-run training schools remained and the budgetary problems of cities in the Depression pushed these institutions into state subsidies or into oblivion. The common criticism of the city normal schools was that they fostered inbreeding and provincialism. The local girls from the local districts were trained and became teachers in the same neighborhoods, frequently in the very same buildings, where they had grown up.

At the same time urban areas were training teachers, rural areas in twenty-four states were using specially designated high shools for training teachers from their areas to serve in these more remote locales. The pattern was to extend high school one year and to provide a certificate. The better programs (e.g., in Minnesota) included practice teaching, the poorer ones (e.g., in Kansas) did not.

As we consider the teacher training offered by city schools or by schools in rural areas, it is clear that it was highly relevant to the practice of training. It was of the schools, by the schools and for the schools. The content learned by teachers to be taught to pupils was essentially the same, with some minimal study in pedagogy tacked on. There was in this relationship the opportunity to safely assume that teachers would be appropriately trained. One could also assert, with some justification, that this situation of great relevance of training to practice *should* be so since it was frequently the very same bureaucracy (i.e., the public schools) that trained both teacher and pupil.

While these training institutions licked the problems of relevance and appropriateness, they disappeared due to lack of funds, the primary factor, and concerns related to teacher quality. The fields of human development, learning, educational philosophy and pedagogy were growing. Similarly, the fields of general knowledge were also expanding rapidly. It became painfully and increasingly clear that most teachers were semi-literate, poorly educated people, in truth, a short step (usually one chapter in a textbook) above the masses they were supposedly extricating from the pools of ignorance. The response to this state of affairs was to insist upon more university education for teachers. As a result, teacher education is now inextricably ensconsed in the bosom of higher education. In exchange for high relevant training of an almost

ignorant corps of teachers, we now have a better educated but less appropriately trained teaching profession.

Under the influence of Dewey, the concept of practice teaching was dropped and the notion of a student teacher engaged in professional laboratory experiences was introduced. The cadet or practice teacher concept emphasized an apprentice practicing the techniques of school teaching. The notion of a student experimenting in a professional laboratory is intended to convey the continuous search of the student of teaching. The student teacher is expected to make mistakes and to learn principles as a result. The practice teacher is expected to practice correct responses. The practice teacher can be evaluated on the same bases as the regular inservice teacher; the performance of effective behaviors. The student teacher is evaluated as a learner; i.e., what he/she learned from today's lesson is of paramount importance. This confusion between the role of practice and student teacher is a major cause for the low quality and quantity of research on student teaching. If the neophyte is essentially an apprentice who must practice, why bother with special study? Simply apply the research literature on effective teaching to the neophyte.

Lest this distinction seem new to you, permit me to point out that it was made in 1904. In drawing the distinction between preparing a student of teaching — one who would act on developing principles and who would continue to grow — and a technician who acts with no undergirding rationale, Dewey (1904) noted:

> For immediate skill may be got at the cost of power to go on growing. The teacher who leaves the professional school with power in managing a class of children may appear to superior advantage the first day, the first week, the first month, or even the first year, as compared with some other teacher who has a much more vital command of the psychology, logic, and ethics of development. But later "progress" may with such consist only in perfecting and refining skill already possessed. Such persons seem to know how to teach but are not students of teaching. Even though they go on studying books of pedagogy, reading teachers' journals, attending teachers' institutes, etc., yet the root of the matter is not in them, unless they continue to be students of subject matter and students of mind activity. Unless a teacher is such a student, he may continue to improve the mechanics of school management, but he cannot grow as a teacher, an inspirer and director of soul-life. How often do candid instructors in training schools acknowledge disappointment in the later careers of even their more promising candidates. They seem to strike twelve at the start. There is an unexpected and seemingly unaccountable failure to maintain steady growth. (p. 8)

The difference between the teacher who has one year's experience thirty times and the teacher who grows each year is attributed to the teacher education program. This debate is the genesis of the gulf that has come to separate those who talk about teacher *training* and *practice teaching* on the one hand and those who use the terms *teacher education* and *student teaching* on the other.

It is similarly noteworthy that the admonition to help student teachers analyze their own teaching rather than to receive constant criticism is also not new and refers back to the concept undergirding direct experiences. Is the experience intended to perfect correct behavior or is the experience to prepare a professional who can monitor his/her own behavior? This debate on the goal of student teaching is manifested most clearly in Dewey's (1904) statement concerning how the student teacher would be supervised (i.e., taught).

> It ought to go without saying . . . that criticism should be directed toward making the student thoughtful about his work in the light of principles rather than induce in him a recognition that certain special methods are good, and certain other special methods bad. At all events, no greater travesty of

real intellectual criticism can be given than to set a student to teaching a brief number of lessons, having him under inspection in practically all the time of every lesson, and then criticize him almost, if not quite, at the end of each lesson, upon the particular way in which that particular lesson has been taught, pointing out elements of failure and of success. Such methods of criticism may be adapted to giving a training-teacher command of some of the knacks of the and tools of the trade, but are not calculated to develop a thoughtful and independent teacher. (p. 22).

In terms of research, there has been and remains no greater need than to systematically gather data to support or refute this contention that certain kinds of practice teaching lead to technicians and other forms of student teaching lead to students of teaching.

The reason for this very brief overview is to simply initiate a pause for thinking. There will, in future, be an inevitable price for making teachers more relevant to school practice. It may not be the same price we paid when we felt any good high school should be able to train teachers, but there will nevertheless be a price! There is a finite amount of time and energy for training. In the push-pull of competing subject matters demanding the neophyte's attention, there are limits on the liberal education, the specialization and the professional education which can be crammed into any period — whether the period is four years, five years, or six years. We must simply accept the fact that if greater connections are to be made between preparation and practice something will be squeezed out of present programs. In today's world of electronic media, films, libraries and other resources, today's teachers will not lapse all the way back to the low quality of nineteenth century teachers. However, we need to be realistic. There will be some academic price to pay for gaining increased relevance.

Finally, this review permits me to underscore the initial point that student teaching is a process learned in dysfunctional bureaucracies. Teacher training is not under the egis of the schools. It is, in fact, under the administration of higher education institutions that are mindful and proud of their freedom from social pressure. Consequently, there should be realistic horizons set for the degree of relevance that can be *re*infused into preservice teacher education. And let us also be aware as we seek to *re*infuse this relevance that we do not go to the extreme of advocating ignorance as the trade-off for practical knowhow. I am certain that if we had training programs in school settings involving four years of student teaching with little or no college work whatever, that we could train more teachers to keep better order and to help children reach higher reading levels than they presently achieve. The question is, dare we implement such "improvements" and risk not having teachers who are first well educated and only second, professionally prepared.

An immediate implication of the foregoing is that I believe I know how to prepare more effective teachers (defining effective as having pupils score higher on achievement tests). This is true. I believe that if we placed high school graduates in a four-year career ladder as paraprofessionals, aides, assistant teachers, student teachers and interns into schools — the very same schools where they would eventually teach. They could be trained to be more proficient and competent (in behavioral terms) than any graduates of present university teacher education programs. It might be possible then to have states require subsequent completion of a bachelors degree in general-liberal studies within a ten-year period. This is precisely what some states did in former times with normal school graduates. The question of purpose remains: Is it better to prepare a technically competent teacher who will subsequently pursue a bachelors degree, or is it

better to require a bachelors (or masters) degree and thereby limit the professional knowhow of beginning teachers? Stated another way, is it better for the practicing teacher to be *primarily* concerned with professional or academic development. "Wise persons" will, of course, answer "both". However, the reality of the situation is that most practicing teachers study, and are required to study, little beyond education courses once they are certified. At present, our system clearly prepares beginning teachers with minimal professional skills who spend almost all of their subsequent study in areas of professional development. It is, theoretically, possible to reverse this entire process. But the organizational linkage between state departments of education and institutions of higher education is too fixed to be changed. Teacher education is owned by the universities. The most that we can do is to use the state to pressure institutions (within limits) to make *their* preparation more relevant, and, on occasion, to use the universities to pressure the state departments (within limits) to loosen up "restrictive" requirements.

This brings us into the well-circumscribed arena where we play by gentlemen's rules. If you in the state will not permit school districts to train teachers, we in the university will continue to support your authority to certify and if you in the university show at least some small effort to make your teacher training more relevant to school practice, we in the state will continue to accredit you — and you alone.

What has happened in the century and one-half since we first adapted and created student teaching in America? Has its evolvement been a regression from a noble beginning, or, has it been refined and improved from crude fits and starts? What critical trends can be identified in this history? The analysis is worth the effort since the development of student teaching is, in effect, parallel to the evolution of teacher education in general. Student teaching has always been the heart and mind of teacher preparation: to understand its development is to grasp the essence of the professional development of educators.

THE NATURE OF STUDENT TEACHING RESEARCH

There is no instance of any widespread practice in student teaching programs that is the result of research. Conversely, there are no common practices that have been dropped from student teaching programs on the basis of research evidence. Essentially, student teaching programs, like all college curricula, are political agreements among faculty and differ only in response to power variations in the organizational setting of the particular college or university. Nevertheless, it would be useful to review some of the types of studies that have been done in relation to student teaching.

The first type of investigations derive from the study of teaching and are simply extrapolated to include what should be taught to student teachers. The most popular examples of this practice are various forms of interaction analysis, microteaching, and competency based teaching. These trends grew out of efforts to systematically improve the practices of inservice teachers. It soon became clear that systems for describing and analyzing teaching could also be used for judging and finally for improving the work of teachers. Once this point was reached it became a short step to studying student teaching using these same modalities. Except for microteaching, the roots of all these

studies derive from the effort to improve inservice teaching, not from attempts to prepare students more effectively. And the research literature of microteaching, although impressive in its ability to specify important pedagogic acts, essentially proves that students who are taught specific behaviors remember and use them more than students who are not taught these behaviors.

The closest thing we have to a continuous pattern of study grew out of the widespread use of the Minnesota Teacher Attitude Inventory by numerous institutions over a period of years. Once the concern of teacher educators shifted from an interest in predispositions, values and attitudes to actual behavior the descriptive studies of students' attitudinal changes dropped into the background.

Finally, the lack of systematic study of student teaching cannot be highlighted more dramatically than to cite the profession's response to the accreditation requirement of Standard VI of the National Council for the Accreditation of Teachers of Education. Even though it is required that student teachers be evaluated upon completion of their preparation programs, there are few if any institutions who can mount such an effort. We tend to regard this as the failure of an individual institution when the common nature of this inability to follow up graduates demonstrates with ringing clarity that our programs are not conceptualized or offered in ways which permit evaluation. My contention is that this situation is, in part, a function of having a political/organizational basis rather than a research/knowledge base for student teaching programs and for teacher education programs in general.

There is infinitely more calling for research and agreements among experts about what needs to be studied than there is actual production of research. For example, experts generally agree that student teaching is the most important part of the preparation program because students rate it as the most useful part of their preservice (Davies & Amershek, 1969). Experts also state that student teaching can be the significant educational experience in preparing students to fight the war on poverty, increase school integration, mainstream the handicapped, disseminate new methods into the schools, improve reading instruction and indoctrinate a new breed of militant teachers who will serve as change agents in the schools. It is noteworthy that at the same time experts call on student teaching as the process for accomplishing this brave new world they generally agree that student teaching does not adequately prepare students for success in their first year of teaching normal children in traditional schools.

In addition to experts "calling for" student teaching to help implement educational and social movements, there is much expert advice on what student teaching "should be." It "should" include an internship, involve theory as well as practice, sequence experiences from easy to hard, encompass various school situations and grades, influence the student affectively as well as cognitively, stamp out sexism and racism in the neophyte, and lead to behavioral teaching competencies. This can be accomplished because it "should be" supervised by practitioners who are competent in all these areas.

Despite what experts "call for" and assume "should be" about student teaching, what we actually know about this process in practice can be summarized in one word — varied (Ebel, 1969). How is student teaching organized? Varied. How is it administered? Varied. What admission criteria are used? Varied. How are assignments

made? Varied. How is it evaluated? Varied. Is it required for certification in every state. Yes.

The final paragraph of Davies and Amershek's 1969 research review would have been equally accurate in 1979 and will probably be as true in 1989.

> given its ascribed importance in teacher education, it is alarming to find so little systematic research directly related to it. Discussion and descriptive reports are plentiful, but comprehensive basic study of the process involved is lacking (p. 1384).

Most of what happens around student teaching is not research but continuous flurry of developmental effort. And most of the developmental effort relates to administrative arrangements (i.e., how many hours, placements, and observations should be made) and does not deal with the *content* of what is taught. Research studies generally agree that when "new" content is developed, students who are offered the new content learn it better than students not offered the new content. In the last decade, summarizing available research on teacher education, Peck and Tucker (1973) reached the conclusion that this situation would change.

> Teacher education seems likely to become a far more systematic process in the years ahead. Its objectives seem likely to be stated in terms of concrete, observable, and trainable teaching behaviors. (p. 970).

Peck and Tucker obviously saw this as an advance over the recent past and in truth it was. In the sweep of things, however, simply making teacher education more specific and concrete is a throwback to Reverend Hall's normal school of 1823. The 1973 summary is superior to the 1969 summary only because it adds all the feedback studies. In sum, these studies tell us that when students are given specific criticism they have a better likelihood of improving and that students taught specific behaviors will demonstrate them more frequently than students not taught those behaviors. Do such studies contribute to knowledge? What research on student teaching has *not* helped us to do is answer the ultimate question. What are the behaviors and knowledge which student teachers must learn in order to become effective teachers subsequently? On this question (i.e., the content of student teaching), variance among the more than 1,000 institutions offering student teaching remains extremely great. Our present knowledge base simply does not derive from research.

In two areas we do have the beginnings of some solid evidence and it is interesting to note that the content of these studies relate to aspects of student teaching that we seek to counteract rather than to implement. The first generalization that we can make with a fair degree of certainty is that cooperating teachers influence students more than college supervisors (Yee, 1969; Seperson and Joyce, 1973; Chie, 1975; Friebus, 1977; Karmos and Jacks, 1977). Nevertheless, I would argue we should continue to use and even expand college supervision since the university personnel emphasize concepts and principles as well as behaviors. If the cooperating teacher's power over the student teacher is permitted to become the total value of the student teaching program we will regress to preparing technicians, not educators.

We also know that when what is to be learned relates to more general aspects of teaching rather than to techniques, cooperating teachers are not the most influential mentors of student teachers (Boschee, Prescott and Hein, 1978).

In a study which contradicts the simplistic notion that cooperating teachers' influence on student teachers is always greater than college supervisors', Zimpher,

deVoss and Nott (1980) indicate several specific functions and forms of influence which are directly tied to the role of the college supervisor. The first function not performed by others that is to be accomplished by the college supervisor relates to goal setting. This involves setting both the purposes for the student teaching experience and establishing expectations for the particular student teacher. A second function performed by the college supervisor relates to setting a sequence of activities of increasing complexity. This graduated induction process which includes observation, planning, tutoring, and small group instruction is contrary to the tendencies of cooperating teachers to "throw students in" from the first day and thereby make the student teaching experience an undifferentiated one with no real qualitative difference between the activities performed by a student teacher on his/her first and last day. A third function of the college supervisor is to offer criticism. There is a tendency for cooperating teachers who have established rapport with students to serve as buffers between students and college personnel, thereby leaving any difficult or negative feedback to the college supervisor. The outsider role of the college supervisor is in this sense an advantage since the professional social distance that is maintained by the college supervisor *vis a vis* the cooperating and student teacher permits the college supervisor to be more objective, analytical and critical. Additional findings indicate that the college supervisor serves to increase communication and to introduce ideas that would ordinarily be ignored by cooperating teachers and students as of little practical application (Zimpher, deVoss & Nott, 1980).

There is no question that the preponderance of evidence supports the notion that cooperating teachers have greater influence than college supervisors over techniques that students adopt. One reason that might account for less research to support the influence of college supervisors is that the influence issue is usually couched in terms of specific techniques rather than principles, goals or personal growth and most college supervisors would agree on their secondary role in the area of technical training. It is also possible that the issues raised in the Zimpher, et al. study might be so generally accepted by those directly involved in student teaching that there is a low (no) felt need for systematic study to support this contention.

The second area in which we have sufficient data to feel we know something definite to act upon relates to an aspect of student teaching which we seek to correct rather than continue. We know that as students move closer to graduation they become more dogmatic (Johnson, 1969). In an effort to counteract this long-standing phenomenon Roy (1972) developed a special student teaching program (Project Together) as a treatment designed to overcome the "natural" inclination of students to become less idealistic, less theoretic and more practical and control oriented as they approached graduation and their first teaching experience. This is a landmark study in that the student teacher literature includes no more carefully planned, systematic effort to countervene the decrease in college influence and the increase in school influence. The content of the treatment involved an elaborate theoretic and substantially research based concept of creating a professional and emotional support group for students. This support group was developed to help student teachers fight against the socializing influences of their cooperating schools. The dependent variables were group centeredness, dogmatism, pupil control ideology and perception of problems. The hypotheses advanced were that Project Together students would be 1) more cohesive,

2) less dogmatic, 3) more humanistic in their outlook towards pupil control, and 4) likely to perceive fewer school related problems. In comparing these students with student teachers not given any special treatment, only the hypothesis that the students could be made more supportive of each other was supported. The non-significant results of this study are indeed significant! Even the most elaborate methods (ones that go well beyond what colleges and universities can afford to provide their student teachers in the way of class size, personalized placement, special instruction, etc.) cannot stop the process whereby students become socialized by classroom teachers. The conclusion reached was that student teachers could be treated in ways that gave them emotional support but could not be made less dogmatic and less custodial without changing the institutions in which they student teach.

Taken together, two generalizations can be derived from research related to student teaching:

1) Students and cooperating teachers tend to agree that student teaching is primarily an opportunity to practice methods[1] and therefore, people or opportunities for furthering such practice will be defined as relevant and useful while activities which distract from the pursuits of technique will be regarded as unnecessary or impractical.

2) The definition of the beginning teacher's role usually defines classroom management as not only a major priority but a concern of overriding magnitude. Student teachers become very narrowly focused on earning skills that they perceive will help them to control and thereby survive. As a result, individual differences in ability personality or professional ideology among student teachers becomes increasingly less important in understanding or predicting their future teaching behavior.

WHAT SHOULD BE STUDIED IN RELATION TO STUDENT TEACHING

The first major area of fruitful research relates to occupational socialization. At this point, we must apply ideas from organizational science and from socialization studies in related service professions. Occupational socialization may be defined as the process by which the neophytes learn the culture, norms and role behavior of the group they seek to be accepted by and to join. Given this definition, it is possible to view problems of teacher education as essentially related to occupational socialization. The content to be studied in this realm are the interactions between neophytes and others in particular settings. It may be, for example, that not only are cooperating teachers more influential than college supervisors (regarding technique) but that others in the workplace (e.g., other teachers, principals, janitors, secretaries, school nurse, etc.) are also more influential in shaping students' total role concept. Medical trainees, for example, who were isolated from the medical faculty often shaped their definition of a doctor on the basis of the nurses' and patients' perceptions (Becker, Greer, Hughes &

[1] In contrast to an opportunity to clarify an educational philosophy, increase self-evaluation skills, test out personal strengths and weakness, try out concepts learned in development or learning courses, seek ways of breaking down and connecting subject matter concepts with individual pupils' interests, trying out various instructional media, seeking greater self understanding regarding reactions to pupils, or make connections between daily activities and the goals of the curriculum.

Strauss, 1961; Mumford, 1970). The principle that might be accepted (on a tentative basis) as a starting point for future study is that the more frequently trainees observe their trainers actually performing and the more frequently the trainee is observed trying to perform the practitioner's role by the trainer, the more influential the interaction becomes. The most important question for future study is the degree to which the particular situational press controls the performance of both trainer and trainee and the degree to which the particular situation is merely incidental to the fact that trainer and trainee are interacting by observing each other's performances. My hunch is that both factors are critical; however, we need more precise information to act upon. If the interaction proves most powerful, then college supervisors face the traditional problem of making more supervisory visits. If school setting is shown to be of greater influence, university supervisors (and other university personnel) have the option of seeking to influence other school practitioners and the setting itself as a way of exerting impact on the student teacher's socialization. For example, should the setting prove the most potent force, university personnel who can change school curriculum, materials, or schedules might exert a greater socializing force on student teachers prepared in that school setting than university supervisors who engage in the traditional practice of criticizing student teachers' lessons.

A second major area of needed research should be directed at the comparison of learning styles of cooperating teachers and student teachers (Sprinthall, 1980). How does the match-up of cognitive style and level between cooperating teacher and student teacher effect the student's learning? Even more important may be the question of how this match-up is effected by the particular school setting in which trainer and trainee interact.

A third area I would propose as a fruitful area for research on student teaching relates to the sequence of activities that lead students from the beginning to the final stage of preservice preparation. Figure 1 is my paradigm of the levels through which a student teacher will naturally move (i.e., from I through VI). My hypothesis for future study is that student teachers move in the reverse order, from Stage VI through Stage I (See Figure 1). They begin with pre-student teaching courses which give them the broadest possible overview and end up at the lowest levels of learning. This contention is an elaboration of our present knowledge that students become more dogmatic and custodial as they approach their first day of teaching. Future study should help teacher educators more fully describe students' stages of professional development.

A fourth area of research should focus on the costs to individuals who seek to become professional (socialized) teachers. Sorenson and Holpert (1968) reported that organizational climate of the school enhances stress in student teachers. Furthermore, while 70 percent of the student teachers experienced stress at the start of the experience, 20 percent experienced stress at the end. Graen (1970) has described the induction process of beginners in work situations as including three phases: initial confrontation, working through and integrating. The initial confrontation stage is most interesting since it described a "disillusionment phenomenon" whereby high expectations before experience are followed by much lower expectations after experience. Vroom and Deci (1971) found these less favorable expectations beginning during the first year, and lasting approximately two and one-half years. This phenomenon has been so reliably documented that it is now expected that newcomers will be "turned

Figure 1.

Stages of Student Development in Professional Laboratory Experiences

Stage I.	Ritualistic-Imitative Student teacher seeks to replicate as much of the behavior of other teachers as possible. (Can I do what these teachers do?)
Stage II.	Reality-Centered Student teacher selects the teaching behaviors to be imitated and focuses on controlling behaviors as the highest priority. (Can I control the class as well as Teacher X?)
Stage III.	Learning Skills Director Student teacher seeks to perfect skills aimed at teaching skills to children and youth. (What specifically did I teach anyone today?)
Stage IV.	Self-Evaluator Student teacher develops skills for self evaluating his/her own instruction. (What specifically did I learn about teaching today?)
Stage V.	Insightful Analyst Student teacher develops feel for, hunches, intuitions regarding the pupils' behavior, their own reactions and the nature of their interaction with pupils in the particular setting. (What is really happening to me and to these pupils in this setting?)
Stage VI.	Professional Decision-maker Student teacher seeks to connect daily activities with school's more general curriculum goals. (What might I do to expedite the process of moving children and youth toward the achievement of program goals?)

off" — that they must invariably go through such a stage — before they can be integrated into the work group. Commentators on this research literature conclude that the most a training program or an induction process can do is to delay the full impact of disillusionment until the newcomer is prepared to cope with it.

Although it is clear that individuals in organizations are substantially dependent upon members of their work groups for gaining the knowledge and skills needed to perform their jobs adequately, little controlled research has been done to explain how this takes place in organizational settings. There are psychological theories of stimulus and response and sociological explanations of inherent needs for group approval and belonging but little to explain the apparently universal drive of inductees to be part of a work group, or at the very least, to not incur its displeasure.

Studies on deviation that seek to identify how much tolerance can be given newcomers also have important implications for laboratory experiences in teacher education. Findings suggest that the freedom to deviate is fairly fragile even for members who have paid their dues with long years of obedience. Pressures to conform to group norms are greatest when group members are motivated to achieve uniformity, when the norm is of importance to the group and when a member's deviant behavior is especially noticeable (Hackman, 1976).

It seems to me that the present public emphasis on basic skills triggers these three conditions in teacher groups. It explains why a student teacher, for example, educated in principles of child development will be steam-rollered into the role of reading tutor by the operating norms of the particular teacher group. Pressures to conform are strongest when the norm is of high intensity and highly crystallized (Jackson, 1965). But this doesn't mean that there are not sufficient controls at all times. As long as a member needs or desires resources over which the group has control, as long as he/she seeks their approval and most importantly for teacher groups — so long as he/she seeks to not be criticized by the group, the member is likely to conform.

The issue is not one of placing students in schools where the teachers get along well together or where there is dissension. Research by Janis suggests that high cohesiveness can in some cases be actively dysfunctional for the group as a whole (Janis, 1972). Janis suggests that as a group becomes excessively close knit and develops a clubby feeling of "we-ness" it becomes susceptible to a pattern he calls groupthink. The major symptom of groupthink is a marked decrease in the openness of the group members to discrepant or unsettling information. These interpersonal strategies, Janis argues, result in an increased likelihood that the group, in a spirit of goodwill and shared confidence, will develop and implement a course of action that is grossly inappropriate and ineffective. Should cohesiveness be avoided? Obviously not. Group norms provide many desirable supports which teachers use to counterbalance the bureaucracy. The question becomes the content of the norms; and the issue for teacher educators becomes the influence of these norms on student teachers and beginners.

A NEXT STEP TOWARD SOLVING THE PROBLEM OF IMPROVED RESEARCH IN STUDENT TEACHING

In order to increase the production of usable research regarding student teaching, individuals who are not now involved in college supervision will have to be attracted to the study of educating and inducting beginners. Those involved in student teaching programs (and in teacher education generally) understand the problems but usually lack the proclivity for research or the skills of systematic study regarding proposed solutions. Skilled researchers, on the other hand, untroubled by history, a full knowledge of practices, or direct experience with the problems tend to study what is researchable rather than what is important. What is needed in future is a *pre-research step* involving future researchers with practicing college supervisors in the process of clarifying and specifying the problems to be studied. Since such cooperative problem definition is not always possible, the 21 questions that follow are intended to serve as a capsule briefing for those who would study student teaching. On the basis of the preceding analysis it should be clear that I regard items #19, #20 and #21 as being of greatest importance.

The fact that these questions are stated as "shoulds" does not make them only policy questions. These questions must now be translated from problems solved by political processes into hypotheses or questions to be studied (e.g., #21). If such translations do not occur, the next 150 years of teacher education will simply perpetuate the same forms of student teaching as the past. The cycle of too few researchers picking off neat but unimportant topics while the main body of college supervisors ask, "What more can I do?" will be broken only by cooperatively attacking and specifying most critical questions. The challenge is both great and interesting. The question is whether sufficient numbers of skilled researchers can be attracted to this very complex area of study and whether they will begin with sufficient intellectual humility to work cooperatively in problem definition.

Questions Most Commonly Raised Regarding Professional Laboratory Experiences

1. Which courses in teacher education should include direct experiences?
2. How should these experiences be organized and integrated?
3. Is there an arrangement of direct experience (e.g., from observation to full teaching) that can be sequenced on the basis of easy to hard?
4. What criteria should be used for selecting students to begin professional laboratory experiences?
5. At what point in their college programs should students be admitted to major student teaching experiences?
6. In how many different situations should student teachers work?
7. With what age(s), in addition to those they have designated as their primary concern, should students work?
8. In which and in how many non-school settings should students work?
9. What should be the bases for determining the length and nature of students'

various direct experiences?

10. What courses and other experiences should precede, concur and follow direct experiences?
11. To what extent should direct experiences be individualized?
12. What are the roles of college faculty, other school personnel and students in developing, shaping, and changing direct experiences?
13. How should responsibilities for evaluating students be divided among college faculty, school personnel and students?
14. What criteria should be used in evaluating student teachers' achievements?
15. Who should make written evaluations of student teachers' direct experiences?
16. What controls should public school personnel (and teachers' associations) exert over professional laboratory experiences?
17. What should be the special training of college faculty who supervise direct experiences?
18. What should be the special training of personnel who supervise students?
19. How should settings in which students are placed be evaluated, selected, controlled? By whom?
20. What should be the content goals of direct experiences? Who should be involved in developing these?
21. What are the impacts of various settings on student teachers?

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CLOSING REMARKS: AN ATTEMPT AT SYNTHESIS

George Denemark*

Attempting to synthesize a day and a half of broad ranging presentations and discussions on the future of teacher education has brought me to the edge of panic. Don't be misled by what may appear to be an impassive countenance. Panic lies close beneath this seemingly calm exterior!

My concerns about the assignment are threefold. First, we have been privileged to hear a series of excellent presentations, each having already compressed volumes of knowledge about teaching and teacher preparation into a single hour. Further compression seems impossible. Second, each participant in the conference has been developing his or her own synthesis — one that represents a melding of conference insights with the experiences each individual has brought along. It is doubtful that an inevitably more general synthesis will prove as useful as those already stirring within each of you. Finally, as I conclude nearly a quarter of a century as dean, a period during which most working days were chopped into fifteen minute attention spans organized around a constantly changing series of problems, I wonder whether I have, as a result, been left with only a fifteen minute intellect.

With these reservations, allow me to summarize in brief fashion several of the linkages or connections among ideas that participation in this conference stimulated in me.

THE NATURE OF EFFECTIVE TEACHING AND SCHOOLING AS A BASIS FOR TEACHER EDUCATION

A thread running throughout many of the presentations and discussions was the emphasis upon the roots of teacher education and the grounds for planning its future depending upon our understanding of the nature of effective teaching and effective schools. It may seem less than startling to underline the need for teacher education to both reflect and contribute to knowledge about effective teaching and effective schools. However, the recent rapid growth of the knowledge base supporting effective teaching and effective schools has outstripped the responsiveness of many preparation programs. Clearly, teachers and schools make a difference in the learning of children and youth. Those things that we know foster learning need to be reflected adequately in the initial preparation of every teacher. As Smith and Orlosky (1975) observed:

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> Teaching is the exercise of social, intellectual, perceptual and manipulative skills under the control of conceptual knowledge. To know the effectiveness of a teacher is to know the consequences of his use of these concepts and skills. To know the effectiveness of teacher training is to know how well it develops these aspects of teacher behavior.

The importance of the connection between teaching and teacher preparation was evident in the remarks of both Richard Hersh and Judith Lanier, as well as in the content for preparation programs proposed by David Smith. Indeed, the very structure of the conference suggests that its planners wished us to examine research and systematic reports of teaching practice as a basis for reflecting on the future of teacher education.

RECOGNIZING THE COMPLEXITY OF TEACHING AND LEARNING

A second thread of continuity apparent in many remarks of both presenters and discussants was the emphasis upon the complexity of teaching and learning. No simple interpretations of the role of the schools or the task of the teacher will suffice for mapping teacher education's future. We must avoid oversimplified either-ors in considering educational goals and instructional strategies. There is no room for "bumper sticker mentality" that proposes simple solutions to complex problems. We need not, indeed, cannot afford to choose between:

- quality teacher preparation *or* creating proper on-the-job conditions supportive of professional practice
- rigorous criteria for teacher candidate selection *or* rigorous training experiences
- academic achievement *or* personal/social development as proper functions of schooling
- administrative leadership *or* effective teachers as key factors in schools improvement and change
- subject matter mastery *or* pedagogical knowledge as central to teacher preparation
- field *or* campus based experiences as pivotal to professional development
- research *or* instruction as the proper function of the college based teacher educator.

Why must we get hung up so often, perceiving only two alternatives for addressing educational issues when the complexity of the tasks demands that we orchestrate many supportive elements into a coherent, comprehensive effort? Suggestive of the multifaceted reality we confront in making instructional decisions and planning educational futures is the question a perceptive father posed to his young son, "How does an octopus tell his right from his left?" Recognizing the complexity of teaching will help us provide the broad professional repertoire of knowledge and skill needed if teachers are to be competent professionals.

THE IMPORTANCE OF INFORMED JUDGMENT

The effective use of a broad professional repertoire points to the importance of

judgment as a hallmark of the competent teacher professional. As Lanier illustrated on her broad stroke canvas of research profiling the effective teacher, the current focus of much research on teaching is concerned with teacher judgment and decision-making. Given the reality of multiple goals growing out of at least four major social functions of education in the United States, teachers are now and will be increasingly required to engage in important decisions and professional judgments about what to do, when and why.

The element of judgment is a central factor in any profession, for all draw upon the knowledge of appropriate supporting disciplines and seek to apply such knowledge to the unique circumstances of practice. Effective teaching can be built upon a scientific base that draws upon pedagogical knowledge as well as its undergirding social and behavioral science disciplines but as with other professions, teaching requires important components of judgment to adapt performance to situation. (Denemark & Nutter, 1980) Providing a context for exercising such judgment must be a central responsibility of teacher preparation programs, beginning with initial general education experiences.

IMPLICATIONS OF PROFESSIONAL STATUS

We have spoken of teaching as a profession and of the development of a broad professional repertoire as essential for teaching competence. Although "profession" is often used popularly as a synonym for occupation that is clearly not our intention. The concept of profession has many implications for teaching and for teacher education as the training arm of the profession. Implications include issues of governance, control of admission to the profession and to its preparation programs, program approval, and more. Viewing schools, colleges, or departments of education (SCDEs) as professional schools implies an accountability to the profession as well as to the higher education institution and an involvement of practitioners in the determination of curricula and certification requirements. Perhaps the enthusiasm registered by Richard Wisniewski for the recent Oklahoma legislation aimed at improving quality standards for teacher certification should be tempered by reflecting on the long-range consequences of increased legislative rather than professional controls.

THE IMPORTANCE OF A KNOWLEDGE BASE FOR TEACHING

Another idea central to the concept of profession and evident in the observations of all of our presentors is the importance of a knowledge base. The knowledge base supportive of teaching as a profession is an outgrowth of professional wisdom (the systematically collected experience of many professionals) and logical analysis as well as research. Hersh struck an optimistic note at the outset of the conference, reporting that different researchers in a variety of studies are reaching similar conclusions about effective schooling and that these conclusions are being reinforced by the critical assessments of experienced school teachers and administrators. Gage, Good, B. O. Smith, Howsam, and others share the view that the knowledge base for teaching is

substantial and has developed rapidly during the past decade. Most would agree, however, that the knowledge base has not been organized and institutionalized effectively and, therefore, not transmitted adequately to practitioners. (Denemark & Nutter, 1980)

David Smith reported on the University of Florida's program development emphasis upon generic teaching knowledge and skills in the three categories of the teacher as teacher, the teacher as a person, and the teacher as a professional. Without achieving broad consensus within and among preparing institutions regarding the things a beginning teacher should know and be able to do in order to function at a safe professional level upon entry into teaching, training programs are unlikely to contribute significantly to the raising of standards.

Haberman's emphasis upon the importance of knowledge of the settings in which teaching and learning takes place reinforces the need for a perception of teacher preparation that acknowledges familiarity with a broad range of instructional strategies and skills while insisting that such familiarity be accompanied by appropriate contextual knowledge.

Discussion of the knowledge base for teacher education calls to mind Lortie's (1975) observation that teaching practice presently depends upon a strongly personal rather than professional base. He maintained that an inordinate amount of the responsibility for what happens in the classroom resides in the teacher as an individual rather than as a representative of a profession. Most instructional decisions are ones based on the personal experience of the individual teacher rather than upon a professional culture generated and maintained by the profession. As a consequence, teachers see themselves as having no clear authority for educational practice and often lapse into ideosyncratic behavior that further limits their acceptance and effectiveness as professionals. Elevating the level of teaching practice from the personal to the professional is vital for the improvement of teaching and represents a responsibility which must be shared by those engaged in teacher preparation.

THE NEED FOR ADEQUATE RESOURCES

Still another theme recurrent or implied in the remarks of our presenters was the importance of providing adequate time, personnel, and material resources to the preparation of competent professionals. The need for extended programs of initial teacher preparation was identified by three of the presentors, while Lanier described plans for Michigan State's response to the need for more in-depth knowledge taking the form of program options concentrating on one of the major functions of schooling. Haberman was more charitable toward enhancement of inservice education as a means of improving teacher education. Should not inservice education be freed to discharge its principal function, that of preparing teachers to meet the needs of a particular employing school system, rather than continuing to be mired in unending efforts to correct the deficiencies left by inadequate programs of initial preparation. Teaching can hardly be expected to achieve public acceptance as a mature profession if it continues to admit to its ranks personnel who are acknowledged to be inadequately prepared to begin practice at a level that ensures the educational safety of the children they instruct.

Time is but one of the resources needed to prepare competent teachers. Peseau and Orr, in a study of financial support for teacher education reported in the October, 1980 issue of the *Kappan*, deplored the outrageous underfunding of most programs. They documented their concern by comparing the annual expenditures for preparing teachers, which averaged $927 per FTE candidate, with the $2363 expended for higher education students generally and with a per pupil cost for elementary and secondary schools in excess of $1400. Can we possibly square the currently inadequate allocation of time and money to teacher preparation with the views expressed regarding the complexity of the teacher's task and its life and death importance? If the future of teacher education is to hold any promise we must do better at attracting resources more nearly commensurate with its obligations.

DEVELOPING A BROAD BASE OF UNDERSTANDING AND SUPPORT

Success in achieving a resource base adequate to support quality teacher preparation is dependent upon the development of understanding and support within and among the various constituencies that affect our programs — the public and their representatives, our student and teacher clientele, our colleagues in teacher education, and others in higher education — most notably those engaged in administration. Collaboration with the organized teaching profession is essential if programs are to be designed that are responsive to the needs of teachers and accepted by them.

Much has been said and written in recent months about the deteriorating public image of teachers and teacher education. Improving that image is undoubtedly linked to upgrading standards for admission to preparation programs and for certification to begin practice. Designing programs of preparation that provide assurance of the beginning teacher's knowledge and skill in both content and pedagogy is essential as well. Furthermore, assuring that conditions of professional practice exist in employment situations supportive of quality training is necessary if the promise of the beginning teacher is to be realized. But all of these must be supported by the establishment of salary levels for teaching that are competitive with other equally demanding occupations. Currently, only social work among the occupations requiring a bachelors degree for entrance pays less to beginners than does teaching.

It may seem strange to call for the understanding and support of colleagues in SCDEs but, unfortunately, a frequent consequence of growth and program differentiation in SCDE faculties has been the development of a remoteness, sometimes even alienation, of some from the obligations of teacher preparation. Some faculty members prefer to identify themselves with a graduate specialization rather than with teacher education and communicate these feelings to students, often spawning another generation of Education faculty with only marginal commitment to preparing competent teachers. The separation of research from instruction in some SCDEs provides further cause for concern. Too often faculty members most active in research are only minimally involved in teacher education while those principally engaged in teacher education are less committed to research and knowledge building. Such fragmentation of faculty roles is likely to result in research that is remote from the improvement of practice and instruction that is didactic and overly prescriptive.

We may have created some of our own problems in teacher education, somewhat akin to the steelworker balancing, along with his buddy, on a girder of a skyscraper under construction in downtown Manhattan. Lunchtime came and both men opened their lunch boxes, unwrapped sandwiches and began to munch on them. After a bit of his, Joe growled, "Ugh, peanut butter!" and in disgust threw it to the street some forty stories below. The same thing occurred on three consecutive days. When his buddy asked Joe why he didn't get his wife to make him some different sandwiches, Joe replied, "Wife, Hell! I make my own sandwiches." Perhaps we are responsible for some of our own problems in teacher education and if so we must address them forthrightly in planning our future. Without a broader consensus among those in SCDEs regarding the importance of their roles in teacher preparation and a genuine commitment to it we are unlikely to achieve either the personal or organizational efficacy Hersh described as being a significant factor in effective teaching and schooling. We need to feel good about the importance of our task and about our ability to perform it well if we are to be effective in the preparation of competent teachers.

THE IMPORTANCE OF ADMINISTRATIVE SUPPORT

Finally, let me comment briefly on the importance of gaining the support and understanding of our colleagues in higher education, most particularly those administering our institutions. Two of the brightest spots on an otherwise gloomy contemporary horizon in teacher education are the recent statements of key administrators from prestigious universities supporting the importance of higher education's responsibilities for the improvement of elementary and secondary schools and the need for an effective school of education to carry out those responsibilities. Stanford President Kennedy in an address to the Carnegie Foundation voiced his conviction that "there can be no more important entry in the public policy agenda of the United States than the quality of our primary and secondary educational systems. . . . Only if the best institutions care about schools and their own schools of education will the public think they are worth caring about: and nothing could be more clearly the business of America's academic leaders" (1981).

Berkeley's Chancellor Heyman (1982), reacting to a challenge to the continued existence of that institution's School of Education, affirmed a commission report holding that "we can imagine few endeavors that are more urgent and worthy than the improvement of the knowledge of the educational process and the application of that knowledge to that process . . .".

> One important thread echoed in the studies before me is that there is no discipline that can be defined as education. Rather, education is a process that only can be defined through other disciplinary eyes. Two tendencies follow. First, faculty members of schools of education are often inclined to allow their research agenda and scholarly style to be shaped by what is acceptable to their academic colleagues in letters and sciences departments. . . . Second, the obverse of the first, faculty in schools of education have retreated substantially from the problems of teaching and learning encountered in the schools.
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> A second thread concerns fragmentation. In the absence of a central mission or idea, faculty members go in a multitude of directions and thus fail to reinforce each other's efforts. . . . Schools of education have largely lost their professional connections. They no longer define themselves in a central and organized way in relation to the problems and opportunities of the profession.

Heyman's conclusion for Berkeley is one that I believe must be reaffirmed at your institution and mine if the future of teacher education and teaching is to hold any promise. We "must convert into a major institutional effort the conviction that few endeavors are more urgent and worthy than the improvement of the knowledge of the educational process and the application of that knowledge to that process. We must do this because the vitality and health of the society requires it and because our success as an . . . educational institution . . . depends upon students well prepared in primary and secondary schools."

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